S. HRG. 108–348

ENDANGERED SPECIES ACT: CRITICAL HABITAT ISSUES

HEARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

ON

TO REVIEW FEDERAL REGULATIONS WITH RESPECT TO CRITICAL HABITAT DESIGNATIONS UNDER THE ENDANGERED SPECIES ACT

APRIL 10, 2003

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C O N T E N T S

ENDANGERED SPECIES ACT: CRITICAL HABITAT ISSUES

THURSDAY, APRIL 10, 2003

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON FISHERIES, WILDLIFE, AND WATER,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:30 a.m. in room 406, Senate Dirksen Building, Hon. Michael D. Crapo [chairman of the committee] presiding.

Present: Senators Crapo, Inhofe, and Thomas.

OPENING STATEMENT OF HON. MICHAEL D. CRAPO, U.S. SENATOR FROM THE STATE OF IDAHO

Senator CRAPO. Good morning. The Subcommittee on Fisheries, Wildlife, and Water will come to order.

Today we are going to be receiving testimony on the designation of critical habitat under the Endangered Species Act. And it's been quite some time since the subcommittee has been focused on the Endangered Species Act and related issues. It's been almost 4 years since we have taken up the issue of critical habitat designation.

In the spring of 1999, the late Senator John Chafee, who was the chairman of the Environment and Public Works Committee, and really a true leader on environmental issues, along with then-Secretary Bruce Babbitt, Senator Domenici and myself worked out a bill to reform the critical habitat provisions in the Endangered Species Act. That bill, S. 1100, improved the efficiency and effectiveness of critical habitat designation while also protecting habitat for listed species.

We reported S. 1100 out of committee with no opposition. And unfortunately, the bill encountered difficulties before the full Senate and no companion bill was ever introduced in the House.

The reason I mention S. 1100 is that issues around the Endangered Species Act have become so polarized and intransigent that I suspect there is not a whole lot of confidence among stakeholders that Congress has the political will to fix problems. I don't believe that's the case with the issue of critical habitat designation. A strong, bipartisan record has been built over the last several years.

Former Fish and Wildlife Service director Jamie Clark testified before this committee in May 1999 as follows: "We firmly believe that attention to and protection of habitat is paramount to successful conservation actions and to the ultimate recovery and delisting of listed species. However, in 25 years of implementing the ESA,

we have found that designation of official critical habitat provides little additional protection to most listed species, while it consumes significant amounts of scarce conservation resources."

In addition, former Secretary Bruce Babbitt authored an "op-ed" for the New York Times in April 2001 in which he defended the Bush Administration for the manner in which it was trying to address the significant number of court orders for designating critical habitat in the face of too few financial resources and biological priorities far more important than the designation of critical habitat. Mr. Babbitt wrote: "These uncertainties undermine public confidence in one of our most important and successful environmental laws. That's why during my tenure as Secretary of the Interior, I repeatedly asked congressional leaders to write budget restrictions that would prevent money from important endangered species programs from being siphoned off into premature critical habitat map making. This request was denied every year."

The Bush Administration now proposes something similar. Mr. Babbitt went on to say that legislative reform by Congress, rather than putting restrictive language in the budget, was the way to fix the problem. I couldn't agree more.

My point is that problems with the Endangered Species Act have not been limited to a Democratic administration or a Republican Administration. Clearly, significant difficulties in implementing the Endangered Species Act have confronted the agencies responsible for carrying out one of our Nation's most powerful environmental laws irrespective of who's in charge. And the problems continue to worsen.

Just a few weeks ago, Fish and Wildlife Service Director Steve Williams testified before this subcommittee with respect to the Service's fiscal year 2004 budget request. Before their budget request was even printed, the Service became subject to additional court orders and other unanticipated judicially enforceable deadlines, rendering the budget request inadequate.

Congress is failing its responsibility to conserve and recover listed species by allowing court ordered critical habitat designations that admittedly have very few conservation benefits to devour more than half of the budget for listing new species every year. I sincerely hope that this subcommittee and the full Environment and Public Works Committee has the will to work together to address this and some of the other very serious problems with the Endangered Species Act.

[The prepared statement of Senator Crapo follows:]

STATEMENT OF HON. MICHAEL D. CRAPO, U.S. SENATOR FROM THE STATE OF IDAHO

Good morning. The Subcommittee on Fisheries Wildlife, and Water will come to order. Today, the subcommittee will be receiving testimony on the designation of critical habitat under the Endangered Species Act. It has been quite some time since the subcommittee has focused on Endangered Species Act related issues and it has been almost precisely 4 years since we have taken up the issue of critical habitat designation.

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position. Unfortunately, the bill encountered difficulties before the full Senate and no companion bill was ever introduced in the House.

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A strong, bi-partisan record has been built over the last several years. Former Fish and Wildlife Service Director Jamie Rappaport Clark testified before this committee in May 1999 regarding S 1100:

"We firmly believe that attention to, and protection of habitat is paramount to successful conservation actions and to the ultimate recovery and delisting of listed species. However, in 25 years of implementing the ESA, we have found that designation of "official" critical habitat provides little additional protection to most listed species, while it consumes significant amounts of scarce conservation resources."

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"These uncertainties undermine public confidence in one of our most important and successful environmental laws. That is why during my tenure as interior secretary I repeatedly asked congressional leaders to write budget restrictions that would prevent money for important endangered-species programs from being siphoned off into premature "critical habitat" map-making. This request was denied every year. The Bush Administration now proposes something similar."

Mr. Babbitt goes on to say that legislative reform by Congress, rather than "putting restrictive language in the budget," was the way to "fix the problem." I couldn't agree more.

My point is that problems with the Endangered Species Act have not been limited to a Democratic Administration or a Republican Administration. Clearly, significant difficulties in implementing the Endangered Species Act have confronted the agencies responsible carrying out one of our nation's most powerful environmental laws, irrespective who is in charge, and the problems continue to worsen.

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I sincerely hope that this subcommittee and the full Environment and Public Works Committee has the will to work together to address this and some of the other very serious problems with the Endangered Species Act.

Senator CRAPO. At this point I would like to recognize our chairman of the full committee, Senator Inhofe. I welcome you here, Mr. Chairman.

OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. Thank you very much. I appreciate the fact that you're getting onto this. When you were talking about how long we've had these problems, people have lost faith that we can correct them, I think you can. I have every faith in you. So I appreciate your holding this hearing.

In Oklahoma, we have seen firsthand the need to revise the critical habitat process of the Endangered Species Act. Five years ago when the Fish and Wildlife Service listed the Arkansas River shiner, I raised the issue of the economic impact of that action. At a minimum, local communities have the right to know what impact an endangered species is going to have. I remember we had a hear-

ing on that, and they had some pretty persuasive evidence. It costs the average farmer along some 1,000 miles of the Canadian about $700 a year to comply.

When the Fish and Wildlife designated critical habitat the economic impact was again raised as an issue. Now the Fish and Wildlife is being sued by a coalition of 18 groups from 4 States because they failed to list them the first time. The Arkansas River shiner is just one example of dozens of cases where the Fish and Wildlife Service is currently being inundated with lawsuits over critical habitat. The result is literally paralysis by litigation. This is detrimental to both the public and to the endangered species, because it means that the agency's scarce resources are stretched even thinner. Only the most high profile problems get any attention. Other duties, such as Section 7 consultations, are neglected, making the ESA that much more of a burden on private citizens. The lawyers seem to be the only ones coming out ahead on this thing.

The critical habitat litigation isn't just a problem for private citizens. As a member of the Armed Services Committee, and having chaired the Senate Armed Services Committee on Readiness, I've heard many times how endangered species have affected the activities in our military ranges. Endangered species are found on a number of military bases across the country, such as the Air Force Academy in Colorado, the Trebles Meadow jumping mouse, the Fort Hood Texas, the golden sheet warbler and the black capped virio, at Fort Bragg as well as Camp Lejeune, you have the red cockaded woodpecker, Fort McCoy, Wisconsin, the Carner blue butterfly, Camp Pendleton, some 17 listed species.

Speaking of Camp Pendleton, we're down now, depending on how some of this legislation comes out, to where we might be restricted to using only about half of it. As I understand, in terms of the miles of shoreline, only a small fraction can actually be used by the services because of some of this habitat.

So all these things are going to have to be considered. I hope that we'll be able to really resolve these problems that others have not been able to resolve. I have every faith that with the combination of Mr. Manson and you, Senator Crapo, that we'll get that done.

Senator CRAPO. Well, thank you very much, Mr. Chairman. I just want to say here on the record while we have the opportunity that it's a privilege to serve with you as the chairman. I have appreciated working with you ever since we served in the House together. I look forward to doing the same at this point.

Senator INHOFE. Let me also mention something I mentioned to Mr. Manson, that I always thought if the Republicans got in charge we'd run things better. So we wouldn't have the conflicting committee hearings. Since John Warner is one of the senior members of this committee and I'm one of the senior members of the Senate Armed Services Committee, in spite of that, we still have coinciding times for our meetings. So I have to be up there at 10 o'clock o'clock for an Armed Services hearing.

Senator CRAPO. We understand that. In fact, we were talking before the hearing about the fact that, maybe it's just because of the war and some of the other things, but the pace up here has gotten to where we're running between hearings left and right. In that

context, Senator Murkowski, who wanted to be here, has provided us with a statement that she wants to have inserted into the record, which we will do without objection.

[The prepared statement of Senator Murkowski follows:]

STATEMENT OF HON. LISA MURKOWSKI, U.S. SENATOR FROM THE STATE OF ALASKA

Thank you, Mr. Chairman. I want to begin by saying I'm very grateful that you are willing to address this issue in the subcommittee. It is one that has desperately needed attention for many years.

While the subcommittee has jurisdiction to address all of the issues surrounding the Endangered Species Act, it does not normally deal with marine fisheries. However, in Alaska, by far the most damaging experience we've had with critical habitat issues has involved just that.

As you may know, my State's largest private industry is the fishing industry, which occurs almost exclusively in salt water. In recent years, with salmon prices down, the mainstay of many towns and villages has become the fishery for Alaska pollock, and for similar species such as Pacific cod.

In many cases, these fisheries occur in the same waters that are used by the Steller sea lion, a listed marine mammal species in the jurisdiction of the National Marine Fisheries Service.

To make a long story short, the threat of litigation forced the Service to designate critical habitat without adequate information, and from that designation came a lawsuit that has done untold millions of dollars of damage to the economy of the State, and to the lives of the people who depend on fishing and in the end, has done nothing to improve the sea lion population.

That lawsuit suggested that because fishing is a human activity occurring in sea lion habitat, and fishermen catch fish that sea lions are known to eat, it must be a foregone conclusion that fishing has an effect on sea lions. As it ran its course, it forced managers to adopt incredibly burdensome and impossibly complicated fishing closures and related regulations, even though there was and is absolutely no proof that fishing has any effect on the sea lion population. In fact, there are plenty of strong indications that fishing is NOT at fault for the problems of the sea lion population.

But the facts of the case didn't matter. What mattered was the law a law that has been interpreted so that nothing less than absolute proof can demonstrate that a human activity is harmless, while even the vaguest of unproven suspicion is accepted as a basis for draconian restrictions.

In the case of our sea lions, it now seems far more likely that they were affected not by fishermen, but by a natural cycle in the environment of the North Pacific which scientists call the Pacific Decadal Oscillation. That is Mother Nature's doing, not man's.

The ancient Greeks had a term "hubris." Very loosely defined, it means when man gets too big for his britches. In our case, the britches in question are being worn by Mother Nature, and we are not nearly big enough to fill them.

The current law is flawed, and deeply so. It carries a presumption of man's guilt that requires that action be taken against activities that may actually be harmless, or even beneficial. It requires no scientific proof to indict and absolute proof to rebut.

Currently, we in Alaska are waiting for what may be round two the Fish and Wildlife Service is considering whether to list Alaska sea otters, whose population has fallen dramatically in recent years. If sea otters are listed, you can be absolutely sure that there will be groups waiting in the wings to file a lawsuit if a critical habitat designation is not made right away. And, although the Service has made it clear that it believes predation by killer whales is the likely cause of the sea otters' problems, not fishing or any other human activity, you can also bet that those same groups will be eager to file a lawsuit to shut down any other activity they may find distasteful, whether or not there is any evidence that it is part of the problem.

While I accept that the Endangered Species Act was adopted with the very best of intentions, and I support those intentions wholeheartedly, it would be foolish to suggest that it cannot be improved. The critical habitat provisions would be a good place to start.

Senator CRAPO. And as other members may be able to find the opportunity to slip in, we will give them an opportunity to make an opening statement when they arrive. But at this point, I believe we will just proceed with the witnesses. Our first panel is the Hon-

orable Craig Manson, who is the Assistant Secretary for Fish, Wildlife and Parks of the U.S. Department of Interior. Mr. Manson, you may proceed with your testimony.

STATEMENT OF HON. CRAIG MANSON, ASSISTANT SECRETARY FOR FISH, WILDLIFE AND PARKS, U.S. DEPARTMENT OF THE INTERIOR

Mr. MANSON. Thank you very much, Mr. Chairman.

Mr. Chairman, Senator Inhofe, I appreciate this opportunity to testify on the state of the U.S. Fish and Wildlife Service's Endangered Species program as it relates to the designation of critical habitat.

Let me begin by saying that the Department of Interior and the U.S. Fish and Wildlife Service are committed to improving the efficiency and effectiveness of the Endangered Species Act, and to achieving the primary purpose of the Act, which is the recovery of threatened and endangered species. We also believe that conservation of habitat is vitally important to the successful recovery and delisting of species.

For several years, the Service has been subject to litigation over its implementation of Section 4 of the ESA, the portion of the Act which relates to listing and designation of critical habitat. Underlying these lawsuits is the proper allocation of limited funds appropriated by Congress to carry out the numerous petition listings, listing regulations, and critical habitat designations mandated under the rigorous deadlines in Section 4.

The Service now faces a Section 4 program in chaos, not due to agency inertia or neglect, but due to limited resources and a lack of scientific discretion to focus on those species in greatest need of conservation. Section 4 of the ESA has strict non-discretionary deadlines and for many years the Service has been unable to comply with all of them within available appropriations.

Private litigants have therefore repeatedly sued the Service because it has failed to meet these non-discretionary deadlines. These lawsuits have subject the Service to an ever-increasing series of court orders, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities, to direct scarce resources to the listing program actions most urgently needed to conserve species.

In addition, many of these critical habitat decisions have fostered a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. The cycle of litigation appears endless, is very expensive and in the final analysis provides relatively little protection to listed species.

Extensive litigation has shown that the courts cannot be expected to provide either relief or an answer, because they are equally constrained by the strict language of the ESA. A number of courts are now recognizing the obvious: that there is a conflict between the ESA and the listing program appropriation. Simply put, the listing and critical habitat program is now operated in a first to the courthouse mode, with each new court order taking its place at the end of an ever-lengthening line. We are no longer oper-

ating under a rational system that allows us to prioritize resources to address the most significant biological needs.

It is already clear that the next Administration will also be affected. Because even at this point, critical habitat budgets into the fiscal year 2008 are being dedicated to compliance with existing court orders. In short, litigation over critical habitat has hijacked our priorities. The listing program's limited resources and staff time are being spent responding to an avalanche of lawsuits and court orders focused on critical habitat designations. We believe that this time could be better spent focusing on those actions that benefit species, through improving the consultation process, the development and implementation of recovery plans, and voluntary partnerships with States and private landowners.

Most important, our efforts to respond to listing petitions, to propose listing of critically imperiled species, and to make final determinations on existing proposals, are being significantly delayed. There are species not yet listed where litigation support has and will continue to consume much of our funding resources. Absent some measure to allow for a rational prioritization of the work load, based on a consideration of resources available, the strict deadlines have instead led to our current untenable situation where high priority actions may be indefinitely delayed.

It cannot be overstated that managing the Endangered Species program through litigation is ineffective in accomplishing the purposes of the ESA. The present system for designating critical habitat is broken. It provides little real conservation benefit for most species, consumes enormous agency resources and imposes huge social and economic costs. Rational public policy demands serious attention to this issue in order to allow our focus to return to true conservation efforts.

In the past, this committee has proposed legislation which the previous Administration supported to move critical habitat designations to the recovery phase of the ESA. We recognize that this is one of a number of potential solutions by which the Congress could address this difficult problem. We welcome the opportunity to work with the committee to craft a solution that meets with wide approval.

Mr. Chairman, this concludes my prepared testimony. I would be happy to respond to any questions that you or any of the other members may have at this time.

Senator CRAPO. Thank you very much, Mr. Manson.

We will turn first to Chairman Inhofe for questions.

Senator INHOFE. I appreciate that, and I will have to be going to the Armed Services meeting. But I want to get into just two things. You talked about how your hands are tied, the problems you're having right now with litigation. By the way, I would like to have my entire statement entered into the record, because I didn't get into a lot of detail that I didn't read.

Senator CRAPO. Without objection.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

I'd like to thank Chairman Crapo for holding a hearing on this important topic. In Oklahoma, we have seen first hand the need to revise the critical habitat proc-

esses of the Endangered Species Act. Five years ago when the Fish and Wildlife Service (FWS) listed the Arkansas River Shiner, I raised the issue of the economic impact of that action. At a minimum, local communities have a right know what impact an endangered species is going to have. When the FWS designated critical habitat, the economic impact was again raised as an issue. Now, the FWS is being sued by a coalition of 18 groups from 4 States because they failed to listen the first time.

The Arkansas River Shiner is just one example of dozens of cases. The Fish and Wildlife Service is currently being inundated with lawsuits over critical habitat. The result is literally paralysis by litigation. This is detrimental to both the public and endangered species as it means that the agency's scarce resources are stretched even thinner. Only the most high profile problems get any attention. Other duties, such as Section 7 consultations, are neglected, making the ESA that much more of a burden on private citizens. Lawyers seem to be the only ones benefiting from the current situation.

But critical habitat litigation isn't just a problem for private citizens. As a member of the Armed Services Committee I have heard many times how endangered species affect the activities of our military. Endangered Species are found on a number of military bases across the country.

For example:

- Air Force Academy, Colorado—Preble's meadow jumping mouse
- Fort Hood, Texas—golden-cheeked warbler and black-capped vireo
- Fort Bragg, North Carolina—red-cockaded woodpecker
- Fort McCoy, Wisconsin—Karner blue butterfly
- Camp Pendleton, California—17 listed species[1]

The science and economic analysis that is incorporated into critical habitat designations will have as big an impact on national defense as it will on economic development.

Ultimately, designating critical habitat should be based on objective and credible scientific data and take into consideration the economic impact of critical habitat. Regrettably, this is rare under the current process. To often, a species is listed without enough data to even corroborate that the population is teetering on the brink of extinction. Nearly half of all the species that have been taken of the endangered species list, were taken off because the original data was in error.

In addition to inaccurate data, the economic analysis required by the statute has been equally deficient.

It is abundantly clear that a complete environmental and economic analysis is absolutely necessary before critical habitat is designated. It's time for the FWS to examine and revise their regulations to ensure that critical habitat is properly designated. Until that happens, the battle of litigation will only continue to frustrate both economic development and species preservation.

Senator INHOFE. But have you come out with specific legislative solutions that you are going to be recommending to us to relieve us from this problem?

Mr. MANSON. I think there are a number of possibilities, Senator Inhofe. We're prepared to discuss a wide range of those possibilities with the committee.

Senator INHOFE. I wanted to ask you also, because it's a little confusing to me, I know under the Clean Air Act, we're actually precluded from using cost consideration, if you talk about cost benefit analysis. Now, it's my understanding that when it comes to the actual listing, you are not to use cost, but in the declaration of a critical habitat, you are supposed to use cost.

Now, those two things happened at the same time. Kind of clarify that for me.

Mr. MANSON. I can. In listing a species, as you say, we are not supposed to take economic considerations into that decision. Crit-

[1]Bald Eagle, Brown Pelican, California least tern, Coastal California Gnatcatcher, Least Bell's Vireo, Light-footed Clapper Rail, Southwestern Willow Flycatcher, Western Snowy Plover, Pacific Pocket Mouse, Stephens' Kangaroo Rat, Southern Steelhead Trout, Tidewater Goby, Arroyo Toad, Riverside Fairy Shrimp, San Diego Fairy Shrimp, San Diego Button–Celery, Spreading Navarretia, and Thread–Leaved Brodiaea.

ical habitat determinations, we are allowed to consider the economic impact or any other relevant factor in determining whether to designate critical habitat.

Now, critical habitat generally under Section 4 is generally to be designated at the time of listing or within a year after listing. That's not happened for the most part for a variety of reasons. One reason is in the past the Service has taken the attitude that critical habitat adds very little to the protection of a species, and thus for the most part found it not prudent to designate critical habitat.

And now we have this tremendous backlog of species without critical habitat, and the courts have for the most part taken away our ability to find it not prudent on the basis that we have in the past. So we are complying with those court orders. We are taking into account the economic impact of the critical habitat designation.

Senator INHOFE. You're aware of course that the Administration has either four or five proposals that I strongly support that address the problem of environmental encroachment on our training ranges. Only one, I believe, of those, has to do with endangered species, but it has to do with your INRMs. Would you kind of give us your opinion as to how they work or don't work or what your feeling is about their use, as opposed to the critical habitat designations?

Mr. MANSON. I strongly support the notion that the INRM plan on military bases that addresses species can serve as an adequate surrogate for critical habitat. In fact, in my view, there are a number of circumstances where the INRM may be superior to the designation of critical habitat. And the reason for that is that the INRM represents a series of real management actions and real management activities agreed to between the Fish and Wildlife Service and the military and the relevant State fish and game agency, to provide for true conservation of those species, whereas the designation of critical habitat does not provide for real management actions.

Senator INHOFE. So you're saying that there are cases, or is it more of a general statement that you are offering more protection to a species with an INRM than you would be with a designation?

Mr. MANSON. In my view, that would be the situation in most cases.

Senator INHOFE. In most cases. That's very interesting. Thank you, Mr. Chairman. That's very good evidence and discussion to have. Because we're going to be pursuing this in a couple of committees. I appreciate your input very much.

Senator CRAPO. Thank you very much.

Senator Thomas, did you want to make an opening statement at this point?

OPENING STATEMENT OF HON. CRAIG THOMAS, U.S. SENATOR FROM THE STATE OF WYOMING

Senator THOMAS. Mr. Chairman, no, not really. I just wanted to come by and begin to show you I appreciate your having these meetings. As you know, I'm very much interested, Mr. Secretary, in endangered species and the process used for listing and for the recovery. Much of it has been very difficult for us. In Wyoming we have listings that are made, I think, without substantial and

enough scientific information. We have listings then that go on forever and we don't ever seem to be coming to an end. Some of them do not have designations as to what the area ought to be, and as in the grizzly bear thing, just keep wanting them further and further.

So I just again wanted to make the point that it seems to me the basis issue we have to deal with even with respect to critical habitat is to have a better basis of scientific information, locations, numbers, sub-species problems and all that in the listing process, and then have a recovery plan. We still have this astounding number of species that are listed and relatively few that have ever recovered. I really think it's time that whatever the problems are that we ought to be really narrowing down so that our focus becomes on recovery rather than listing.

I guess I just continue to kind of make the same point. But we continue to have the same problem. So that's really my point, Mr. Chairman.

Senator CRAPO. Thank you very much.

I'm going to continue with questioning now, if you'd like to do a round of questioning before or after me, that's fine. I have to go to, as usual, another hearing here.

Mr. Manson, would you tell me how many court cases have been brought dealing with critical habitat since 1998? Do you have any information on that?

Mr. MANSON. I don't have information since 1998. I can get that for you. I can tell you what the current state is as of today.

Senator CRAPO. If you would, please.

Mr. MANSON. As of today we have about 31 pending lawsuits and we have a number of notices of intent to sue. The exact number since 1998 we will research and we'll be able to provide that to you.

Currently the notices of intent to sue as of the end of last month amount to 26, intent to sue. But in addition to that, we've got 158 backlogged critical habitat actions as well.

Senator CRAPO. What is a backlogged critical habitat action? That's where there isn't yet litigation?

Mr. MANSON. No, that's an action where there's been litigation and we are, it's in the pipeline to have a designation made pursuant to an order.

Senator CRAPO. That's 158. So basically you have 158 cases where you are now through the litigation but working on the backlog.

Mr. MANSON. Right.

Senator CRAPO. You have 31 pending suits and then did you give me a number of notices?

Mr. MANSON. Twenty-six notices.

Senator CRAPO. Twenty-six notices.

Do you have any information about how much in attorney fees and to whom the Department has paid money with regard to this litigation?

Mr. MANSON. I don't have an exact figure for you. I can provide that to the committee.

Senator CRAPO. If you would, I'd appreciate it.

Can you give me a feel for the budget impact of this litigation? If you have actual numbers, I'd appreciate that, or if you have per-

centages or portions of the budget that have had to be diverted into this, or what portion of your budget do you utilize to spend on this litigation, that kind of analysis, could you share that with me?

Mr. MANSON. I can tell you this, and we can certainly provide you a more complete analysis, I can tell you this, that in the listing program for fiscal year 2003, we had about $9 million in that listing program. Almost all of that is devoted to responding to critical habitat or other listing litigation.

At the current rate, we will probably use all of that up before the end of the fiscal year, some time in the early summer we will have exhausted that amount of money.

Senator CRAPO. And if that money were not being used in litigation, where it be utilized? Where would you put it?

Mr. MANSON. It would be utilized for looking at higher priority listing actions. We'd be determining on a biological basis, not on a litigation basis, which actions ought to have priority.

Senator CRAPO. Would that involve additional resources for development of recovery plans and the like?

Mr. MANSON. The recovery budget is a different line item. But surely we could certainly use the personnel that are devoted to these activities and make better use of their time toward recovery. Certainly if we didn't have as many of these actions and if we weren't using all of the listing budget, we certainly could find ways to use that money in the recovery process.

Senator CRAPO. In terms of the personnel under your supervision, can you give me a feel for what percentage of them spend their time on litigation, as opposed to what percentage spend their time on other aspects of the administration of the Act?

Mr. MANSON. I have not considered that on a percentage basis, but I can certainly find that out for you.

Senator CRAPO. Would it be a pretty sizable percentage?

Mr. MANSON. It's a sizable percentage of the folks in the endangered species program, yes.

Senator CRAPO. I know that one question which we probably ought to talk about is there may be, I haven't heard this yet, but I'm guessing that one response to this might be, we'll just put more money in it, we'll have Congress put more money in the budget so that we can have all the people we need for recovery actions and all the people in process that we need for other aspects of implementation of the Act and still have lots of people for litigating.

If we had an unlimited budget, and we had an agreement from all parties that we could just pick the right time and place to designate critical habitat, so that litigation wasn't a concern, money for litigation wasn't a concern, and impact on other administrative actions with regard to the Act weren't a concern, where should we put in the process for the best recovery effort for species, where should the timing of the designation of critical habitat occur?

Mr. MANSON. There are a number of possibilities. In S. 1100, for example, it was placed in the recovery arena. That seems to make a lot of sense, because after all, we are talking about, statutorily the language is essential to the conversation of the species. We think of conservation in terms of recovery. As Senator Thomas was saying, recovery is where our focus ought to be. That is the real

purpose of the Act. The Act is not intended to be perpetual hospice care for species.

Senator CRAPO. So if you had your way, and you could in the interest of the species place the timing of the designation of critical habitat, you'd put it at the recovery process?

Mr. MANSON. I certainly would, that would be very high on the list. That would probably be the top choice for a place to put it.

Senator CRAPO. All right. Thank you. I'll withhold for a moment, and Senator Thomas, if you have any questions at this point, I'd be glad to turn to you.

Senator THOMAS. Yes, again, in a very broad sense, to sort of give us a feel of, in terms of moving toward recovery, what do you think is the most important change we could make?

Mr. MANSON. Well, probably one of the most important changes we could make to reemphasize the recovery aspect of it, is frankly what we've been talking about today, and that is to do something to relieve the Service of the burden of critical habitat at an early stage of the process, to eliminate the litigation, to relieve the budgetary pressure on the resources. All of those things would be important to get the focus back on recovery.

Senator THOMAS. When you made a listing of a species, at the same time it seems to me it's appropriate to have, at least in a broad sense, a general recovery plan, does that necessitate having a specific critical habitat area?

Mr. MANSON. Well, you know, it's interesting to me that for example, in California, where I am from, California in 1983 adopted a State endangered species act that was largely modeled on the Federal Endangered Species Act. And the focus in that State endangered species act was on recovery, just as in the Federal Act.

It's noteworthy that California chose, California has the most robust State endangered species act in the country. It's notable that in 1983, and since that time, California chose not to adopt a critical habitat provision in their State endangered species act, which goes to show, I think, that you can focus on recovery without having a critical habitat designation in the act. There are also a number of other States that have similar State endangered species acts with focus on recovery that don't require a designation of critical habitat.

Senator THOMAS. California's record of recovery is better than the Federal?

Mr. MANSON. Well, I'd have to sit down and make an analysis of that. There are species that have been delisted in California, just as there are under the Federal Act. But I don't know the comparative figures.

Senator THOMAS. That certainly ought to be the goal. I guess one of the frustrations about this whole thing is that this listing and being carried on as an endangered species seems to go on forever. There needs to be some solution. So I'm glad you're working at that, and certainly if that's the case, Mr. Chairman, that's something maybe we can help do.

Thank you.

Senator CRAPO. Thank you, Senator Thomas.

Mr. Manson, I want to go back to a couple of other areas. One area that I'd like to get into is the impact or what benefit designa-

tion of critical habitat brings and at what point that benefit is best utilized. Does the inclusion of impacts on the critical habitat in the consultation process under Section 7(a)(2) provide protection for a listed species over and above the jeopardy standard that is already being applied?

Mr. MANSON. In my view, it's largely duplicative of the existing protections under the Act. There is one circumstance in which it may have some marginal additional benefit. And that has to do with the adverse modification of critical habitat. Now, that situation is in a little bit of flux right now, because the Fifth Circuit, in a case a few years ago, ruled that the Service was using the wrong standard with respect to adverse modification of critical habitat. And the Service is working to adopt a new definition of adverse modification of critical habitat.

Now, that only becomes important where there is unoccupied habitat designated. And it is the rather unusual case that unoccupied habitat is designated as critical habitat. So that's why I say, it's only a marginal benefit in most cases. So for the most part, the designation of critical habitat is largely duplicative of other protections under the Act.

Senator CRAPO. To this point in the questioning, I've focused on where we should do the critical habitat designation. But I think that at least in terms of getting the issue fleshed out, we ought to talk about what some have proposed, which is whether the designation of critical habitat itself is justified, or whether it causes so much litigation and contention that it actually is something that should be taken out of the Act and let other standards like the jeopardy standard and the like be those that guide us in the recovery of species.

Should critical habitat concepts be removed from the ESA because of these factors? Or do you believe that there is a place and a point in the Endangered Species Act where they do provide sufficient benefit to justify the disruption and difficulty that we now experience with them?

Mr. MANSON. The one thing that should be understood is what is meant by critical habitat designation, first of all. Critical habitat designation does not result in the protection of habitat. That's done through other means, under the Act or outside the Act, through means other than the designation of critical habitat. As I was talking about other State endangered species acts, which don't have definitions of critical habitat, it seems apparent that it's possible to have an endangered species act that protects habitat, which recovers species, which protects the conservation of those species without designating critical habitat.

The Act describes critical habitat as those areas which are essential to the conservation of the species. And it's possible to know and understand what those areas are without the process of designating them. For example, there are about 1,260 listed species on the Federal list right now. Only about a third of them, or less, have designated critical habitat. Yet the other two-thirds are being protected, are being conserved, habitat is being conserved for them, even without the designation of critical habitat.

So the answer to me is that where we have a process that is costly, that causes a great deal of social and economic upheaval on the

one hand, that results in litigation and practically puts a program of the Fish and Wildlife Service into receivership, and on the other hand seems to have little benefit, then it seems to me that there's a rational public policy answer to all of that. And certainly if the Congress decided that we could do without it, this Service could carry out its mandate under the Act without it.

Senator CRAPO. Thank you. To back up to the line of questioning I was following a few moments ago, if instead Congress were to change the time at which critical habitat was designated to the recovery process, would that significantly assist in removing the litigation and resolving a lot of the problems that now cause these difficulties within your budget?

Mr. MANSON. I think it would. For one thing, a lot of the litigation is driven by the deadline pressures in the Act. And that would change that factor quite significantly.

Senator CRAPO. I know that from what I've seen, and I was aware of the Fifth Circuit case you talked about and several of the other cases that have come down on this issue, but one thing that seems to stick out to me is that there is a little bit of confusion as to just what critical habitat is under the Act. A moment ago, you gave a brief definition of what it was. But if I recall correctly, there is some disagreement at least in the court system or in other areas as to whether we actually know what the Act requires in terms of designating critical habitat, what it is that the Act is asking us to do.

Do you think in the process of addressing this issue that Congress should clarify what, if Congress were to keep the process of critical habitat in the Act, the designation of critical habitat in the Act, regardless of where the timing was, do you think it would help if Congress addressed the issue of the definition of critical habitat, or do you think that we have a sufficient clarification there that we should leave that alone?

Mr. MANSON. I think it would be useful. I gave half of a definition when I was talking about it earlier. The Act says that it is areas on which, which are essential to the conservation of the species and which may be in need of special management considerations or protection. And those terms are not defined in the statute. And it would be of use, I think, for Congress to define what is meant by essential to the conservation of the species.

There is a case decided in the district court in Arizona that addresses the issue of being in need of special management considerations or protection that has clouded the definition and has made it difficult for us to definitionally decide what is in and what is out, in terms of critical habitat. If that case becomes precedent by an appellate court decision, which it might, then it would become all the more important for Congress to address what is meant by special management considerations and which lands are in fact in need of special management considerations and protections.

Senator CRAPO. Thank you.

There are a couple of questions that some of my colleagues who weren't able to get here wanted me to ask, so I'm going to divert from my line of questioning for a moment and ask a couple of these questions so they can get them on the record.

The first one is, when the Fish and Wildlife Service delays designating critical habitat, how much of it is due to the fact that the agency doesn't have enough quality information about the population size, distribution or biology of a species to figure out what specific areas should be included?

Mr. MANSON. Well, certainly that has sometimes been the case. I couldn't tell you how often that's been the case. There are two, in the statute, two threshold issues. One is whether or not critical habitat is prudent and the other whether it is determinable. Most of the time in the past, when the Service delayed designating it, they felt it was not prudent. Sometimes it's been because they felt it was not determinable. And the exact, far more because it was not prudent. The exact percentages, I'd have to research that.

Senator CRAPO. All right. Thank you.

Another of the questions is, in terms of designating critical habitat, the language in the Endangered Species Act suggests that one of the goals of critical habitat is to ensure that there is enough habitat protected to ensure that species don't go extinct before the Fish and Wildlife Service can begin the recovery process, the habitat that species needs to have to hang on to survival. Does the Fish and Wildlife Service typically have enough quality information about the base survival needs to designate critical habitat to fulfill that need?

Mr. MANSON. Well, first, I'm not sure I completely agree with the premise of the question. But second, at the time that a species is listed, and at the time that we would ordinarily start looking at critical habitat, sometimes the Service in fact does not know enough about habitat issues to understand fully what habitat is essential to the conservation of the species. They know enough about habitat to know what the threats are, which is one thing. But it's a different thing to understand what it essential to the conservation of the species.

Senator CRAPO. All right, thank you.

One of the other cases that I want to talk to you about for a minute is the New Mexico Cattle Growers Association case in the Tenth Circuit, which as you know found that the Fish and Wildlife Service's analysis of only incremental economic impacts of critical habitat designation above the impacts already created by the Endangered Species Act and the Section 7 jeopardy constraint were unlawful.

This decision is now almost 2 years old. I'm interested in what the Service has done to change the manner in which it conducts its economic analysis under the Endangered Species Act for critical habitat purposes.

Mr. MANSON. The Service is applying the New Mexico Cattle Growers case, and we from a policy perspective are constantly refining the guidance that we give the Service in terms of applying New Mexico Cattle Growers. It's a learning process, quite frankly, because it's a different way of doing business. And every critical habitat designation that comes through, I think the Service learns a little bit more about how to do economic analysis.

So it's an educational process. It's a process of refinement and honing. I think we're getting there.

Senator CRAPO. Is the guidance that you talked about going to be published?

Mr. MANSON. At some point, there will be published guidance on that, yes.

Senator CRAPO. Currently, the Fish and Wildlife Service is required to prepare the appropriate analysis under NEPA for designations of critical habitat in areas under the jurisdiction of the Court of Appeals for the Tenth Circuit. Is the Fish and Wildlife Service considering how to merge this with the economic analysis?

Mr. MANSON. That is something that we have talked about. I don't have any specific proposals or news about that. It is something that is in the think tank stage right now.

Senator CRAPO. Thank you. If you would just wait for one moment.

All right, well, Mr. Manson, in the interest of time, I'm going to submit some other questions that I have to you in writing. I just wanted to thank you for coming here. We've had great support from the Fish and Wildlife Service, both under the Clinton Administration and the Bush Administration in terms of dealing with this issue. As you said and as I indicated in my opening remarks, there has been a tremendous amount of agreement between the administrations and people from different perspectives on this issue that we have a problem that we need to deal with. I'm hopeful that with your help and the help of the witnesses we're going to have here today and other interested parties we can come together and build a path forward where we can all agree that we're going to make an improvement for the species, which is the objective of our management of this Act.

So I thank you for your time in coming here today.

Mr. MANSON. Thank you, sir. We are looking forward to further working with the committee on this matter.

Senator CRAPO. Thank you very much.

I'd like to now call up panel No. 2. And while they're coming up, I'll announce who they are. On this panel first we have Mr. Jeffrey Kightlinger, the General Counsel for the Metropolitan Water District of Southern California; Mr. John Kostyack, Senior Counsel for the National Wildlife Federation; Professor David Sunding, Associate Professor of Agricultural and Resource Economics at the University of California at Berkeley; Mr. Craig Douglas, who is with Smith, Robertson, Elliott & Glenn; and Mr. William Snape, the Vice President and General Counsel of the Defenders of Wildlife.

Gentlemen, we welcome you all here. I did not indicate at the outset, which I should have done before the first panel, but we always run into a situation on timing here where you've got more to say than the time allows. We would like to have you have the opportunity to say that, but we also want to have the opportunity for the give and take among the panel and with questioning.

So we do have a clock, I can assure you that I and the other Senators and our staff will read your written testimony, so you don't have to feel that you have to read every word of it. We'd like to ask you to summarize your statements. There's a clock in front of you that gives you that indication. Then I would hope to have a good longer time period for us to get into some give and take and discussion of some of the issues that I'm sure you will bring up.

So with that, Mr. Kightlinger, why don't you begin?

STATEMENT OF JEFFREY KIGHTLINGER, GENERAL COUNSEL, METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Mr. KIGHTLINGER. Thank you, Mr. Chairman. Good morning.

My name is Jeff Kightlinger. I am the General Counsel for the Metropolitan Water District of Southern California, and I'm testifying here today on behalf of the Western Urban Water Coalition. The Coalition represents 17 metropolitan areas in 6 States, covering about 30 million people we serve water to. The mission of our agencies is to deliver and develop a high quality water supply and a reliable water supply. The challenges we face are rapidly growing populations, arid conditions in the western United States, and balancing the requirements of the Safe Drinking Water Act, the Clean Water Act, and the Endangered Species Act.

I have submitted some detailed testimony specifically on critical habitat issues. I'd just like to highlight some of the specific issues that are facing our types of agencies in meeting these issues.

The Coalition tries to get very pragmatic and deal with responsive solutions to endangered species issues. The most significant issue, as touched upon by the testimony of Mr. Manson and highlighted by your questions, is of course the timing issue: when should critical habitat be designated. Right now, the service agencies, their focus is on species, which is appropriate, because it is the Endangered Species Act, not the critical habitat act.

So you look at the species first, you determine what species should be listed as threatened or endangered, and then at that point, simultaneously you're supposed to list the habitat. But most of the science, most of the information, most of the work has been on looking at the species, not on looking at the habitat. So it leads the agencies to what is basically a Hobson's choice here, should they designate that habitat based on incomplete information, not all the science that they need to make a fully informed decision, or should they delay making that designation until such time that they develop the information.

The pattern and practice has been to delay that designation for a time period, and then work on that as they go along. That has led to the lawsuits, the paralysis that you've heard testified to today, the number of lawsuits. The courts then start setting the priorities of the agencies, because the courts have to deal with the Act as written, and the agencies don't have the information to designate the habitat, so they get directed to do so. You have the court setting the agendas and the priorities of the service agencies, and we would submit that the courts are not in the best position to do that, because they would only have the limited facts put before them on that species or that habitat.

It also leads to significant regulatory burdens placed on agencies such as ourselves, because the service agencies in response to that end up designating broad swaths of critical habitat throughout, without taking a detailed look at where the most appropriate habitat or the most important habitat should be looked at and designated first. This leads to a significant regulatory burden with significant economic costs for those involved.

The issues and the proposed solutions we would suggest, No. 1, is the timing issue. And that requires amendment of the Act, and that is of course, as you're well aware, quite difficult to do. But we still believe that that should be a focus. We would like to see the timing issue put in the discretion of the agencies and pushed back more toward designation of critical habitat into the recovery plan process, where people can look at habitat. We believe this would lead to development of more habitat conservation plans and looking, instead of a species by species approach, a broader habitat approach. If the agencies had some discretion, that would free up resources from lawsuits and we think better direct those resources.

A couple of other solutions, or proposals we think could be looked at, and probably looked at sooner rather than later in the more regulatory framework, we'd like to see some more definition and clarification of adverse modification. As Mr. Manson testified, there have been several cases out there that are in potential conflict with each other. We would like to see clarification of how habitat modification relates to jeopardy recovery standards.

Another matter that the Administration could detail is, we would like to see a detailed methodology for economic analysis developed. We think this should be done through a public comment process. This should be done as part of regulatory action. And that would lead toward a better cost benefit analysis, leading to prioritization of habitat. Right now, all habitat is treated as equal. There isn't good prioritization about which habitat we should focus on first, and that the agencies could then respond to, in prioritizing how to save or work with that habitat and use less stringent measures for other habitats.

I will halt there, and you have the detailed testimony. Thank you.

Senator CRAPO. Thank you very much, Mr. Kightlinger.

Mr. KOSTYACK.

STATEMENT OF JOHN F. KOSTYACK, SENIOR COUNSEL, NATIONAL WILDLIFE FEDERATION

Mr. KOSTYACK. Good morning, Mr. Chairman. Thank you for the opportunity to testify today.

I would like you to know at the outset we're at the 30th anniversary year now of the Endangered Species Act. We have a lot to celebrate. Many species that were plummeting toward extinction today have been stabilized and many others are on the path to recovery.

Yet at the same time, there are species, too many species, that are not yet on the path to recovery. Scientists tell us the No. 1 reason for that is habitat, habitat loss, fragmentation, degradation. We need to do a better job of protecting habitat.

Critical habitat is one of the most important features of the Endangered Species Act to address the habitat issue. In my written testimony I go into much more depth than I will have time for right now to lay out the various reasons why critical habitat is so important. Real briefly, it serves an important educational function. It protects habitats that otherwise would not be protected by other features of the Endangered Species Act. And it has a clear mandate for the Federal agencies.

Now, I would be the last to argue that implementation of critical habitat has gone well over the years. We've had a lot of problems. I just recently co-authored a law review article to get into this. So I've been following it pretty closely. I'd like to walk through about seven suggestions for how we can improve the process.

First, the services have to do a better job of defining which lands and waters are essential to species conservation. The Act sets forth a three step process for designating critical habitat. The first step is the inclusion process, where habitats essential to the conservation of species are identified. The second part is the economic impact analysis. And the third part is the exclusion process where you can look at the economic impacts and determine if the benefits of exclusion outweigh the benefits of inclusion.

Unfortunately, the services have short-circuited that process and have excluded many, many millions of acres of important habitat in the first step. The one example I can give you is the Mexican spotted owl situation, where the Fish and Wildlife Service excluded over 90 percent of known owl locations from critical habitat, in the definitional process of what is critical habitat, the first step. These are areas where the logging industry held sway, where protection was needed. There was never any cost benefit analysis of that.

So that needs to be fixed. There needs to be new guidance and the services need to be directed to make that key determination, inform the public which habitats are essential for the conservation of the species.

Second is, change the timing of the designations. I would agree with the comments that have been made up to now that we can get better science into the designation of critical habitat if the timing were changed to align with the preparation of the recovery plan. I was around during the discussions over S. 1100, in fact, I testified back then. At the time when the bill was first introduced, we made some suggestions of how to improve the bill.

The committee was actually quite helpful in bringing all the interest groups together and making some key changes. And in the end, it was a bill that we could support. And in essence, it provides for deadlines for both recovery plans and critical habitat, and aligned those deadlines. Perhaps equally important, it provided for the cleanup of the backlog of critical habitat designations. So a similarly targeted approach to improving the process would be welcome today.

Third, there needs to be guidance on the economic impact analysis. We've had major problems, particularly with the Administration's adoption of the controversial New Mexico Cattle Growers ruling out of the Tenth Circuit. That ruling, inconsistent with the Endangered Species Act, has expanded the economic impact analysis to go way beyond looking at the impacts of critical habitat. Looking at the impacts of critical habitat alone are costly enough. Expanding the process even further is a major mistake.

And to add insult to injury, during the reevaluation of all these economic impacts, the Administration has pulled back on protection of species. And that is causing major problems for our listed species. At a minimum, the Administration should begin a rulemaking process to discuss how to do economic impact analysis.

Fourth, there needs to be some kind of limit on the exclusions from critical habitat. The Administration has signaled that it is embarking on a major expansion of this third step in the critical habitat process where habitats that have already been deemed to be essential to the conservation of the species are excluded from the critical habitat designation. It's extremely misguided, in our opinion, to be pushing for all the Department of Defense lands to be excluded from critical habitat. The INRMPs are not an adequate substitute. In fact, we have an inspector general report out of the Defense Department that says we don't even have data on whether or not these INRMPs are being implemented.

So it's a worrisome trend on the part of the Administration to basically open the doors wide and to exclude all kinds of habitat from the critical habitat designation without setting any standards. We need some standards to be set.

Fifth, the adverse modification definition in the regulations needs to be revised. The Sierra Club v. Fish and Wildlife Service case was quite eloquent in laying out the reasons. In the past, under this regulation, adverse modification has been limited only to situations where an action would affect both recovery and the short term survival of species. That's not what the Act says. Critical habitat is to deal with situations where the recovery of the species by itself is impacted, and the Administration 2 years after the issuance of that ruling, over 2 years, still has not responded. It needs to fix this problem.

Sixth, the public needs to be educated better about critical habitat. There is so much confusion about this aspect of the law. I would cite a New York Times article, March 17th, 2003, where developers claim that the proposed habitat designation for the pygmy owl in southern Arizona would effectively bar development of 1.2 million acres of private, developable land in the Tucson area. This assertion, unfortunately pretty typical in the critical habitat debate, is way out of line with reality.

There is no effect of a critical habitat designation on private land unless a Federal permit or Federal funding is involved. And even in those cases where there is a Federal action on private land, it doesn't mean that the development is stopped. It means that a consultation happens.

So these kinds of statements in the media essentially claiming that the world is going to come to an end as a result of critical habitat need to be responded to. The Administration has an obligation to build public support for the Endangered Species Act, not to allow the Act to be undermined.

Seventh, I guess I'll make this my final recommendation, perhaps the most important one. The funding situation does need to be addressed. So many of these problems can be avoided, the train wrecks can be avoided if the Congress would simply appropriate sufficient money to designate critical habitat and carry out the other basic functions of the Act.

I will leave it there, Senator, and be happy to answer any of your questions.

Senator CRAPO. Thank you very much, Mr. Kostyack.

Mr. SUNDING.

STATEMENT OF DAVID L. SUNDING, PROFESSOR, UNIVERSITY OF CALIFORNIA AT BERKELEY

Mr. SUNDING. Mr. Chairman, I appreciate the opportunity to speak with you today about the economic impacts of critical habitat designation. As you mentioned, I am a professor of natural resource economics at UC Berkeley.

For the last 2 years, I have worked with colleagues and students to understand the effects of environmental permitting on the process of urban growth and development. As part of this larger research program, I've had the opportunity to consider the economic impacts of critical habitat designation. Critical habitat designation imposes costs on private and public entities alike. The most obvious aspect of cost is the direct out of pocket expense required to complete the Section 7 consultation process.

Sources of cost to the applicant include hiring outside consultants and attorneys, to assist with the consultation process, and also the applicant's own staff resources. Another direct cost of Section 7 consultation is that the Service may require additional mitigation above that required by the action agency. Adding the cost of Section 7 consultation to the cost of mitigation, the direct out of pocket cost of Section 7 consultation can be substantial, running to several thousand dollars per house in the case of some single family housing projects.

The third type of economic impact resulting from critical habitat designation is that the Section 7 consultation process may also force project developers to redesign their project to avoid modification of certain areas deemed to be critical habitat. This project redesign typically reduces the output of the project.

Because critical habitat designation increases the cost of development and reduces the level of project output, it has the potential to alter regional markets for housing, commercial space and other types of development. In particular, critical habitat designation can increase market prices for these goods and result in large losses to consumers.

Critical habitat designation can also delay completion of projects. Project delay is a pure loss affecting both producers and consumers. Delay affects project developers by pushing out project receipts further into the future. Delay affects consumers in that they must postpone enjoyment of the project output. For example, if the project in question is to construct a school, then parents and students must wait to use the new facilities. If the project is to construct new homes, then homeowners must live temporarily in a less than optimal location, perhaps having to commute longer distances during this waiting period.

Critical habitat designation is essentially an ad hoc tax on development applied to areas where a particular species happens to live or is deemed to have the potential to live. This tax is applied, again, to public and private projects alike, and can be quite large, in fact, easily reaching in excess of a million dollars per acre of critical habitat conserved. Given the magnitude of this disincentive, it is really not stretching the point to say that critical habitat designation can literally change the shape of urban areas and another class of economic impacts results.

A natural question to ask here is whether by limiting growth in certain areas critical habitat designation pushes development to areas more distant from the city center, away from jobs, shopping areas, schools and other amenities. If the effect of critical habitat designation is to force relocation to areas further out on the urban fringe, there can be some important regional and indirect consequences of designation as well. For example, if critical habitat designation forces consumers to locate further from their jobs, then designation may increase traffic congestion and commute times and may contribute to regional problems of sprawl and air pollution.

A final point that I'd like to make is that critical habitat designation can imposes costs beyond the Section 7 process and even beyond the Federal nexus. One concern here is that development is subject to numerous regulatory processes carried out by Federal, State and local authorities. If land is designated as critical habitat by the Fish and Wildlife Service, this designation may affect the way the project is treated by other agencies through what economists would call a signaling effect.

Another concern is that designation of critical habitat can impose costs on developers even if their project is not in critical habitat at all. The Fish and Wildlife Service defines critical habitat in such a way that some time and expense is needed to determine whether a parcel is actually included or not. Thus, developers can spend money just to determine they are not in critical habitat at all.

I'll conclude my oral remarks there. Again, I thank you for the opportunity to address the committee, and will be happy to answer any questions.

Senator CRAPO. Thank you, Mr. Sunding.

Mr. DOUGLAS.

STATEMENT OF CRAIG DOUGLAS, ESQUIRE, ATTORNEY, SMITH, ROBERTSON, ELLIOTT & GLENN, L.L.P.

Mr. DOUGLAS. Good morning, Mr. Chairman. I appreciate the opportunity to be here today with you, Assistant Secretary Manson and the other panelists to discuss critical habitat in a forum where we're all interested in finding solutions that work for the species and the people that live amongst them.

I am from Austin, Texas, and my firm represents clients across the country that are engaged in a wide variety of industries in connection with both regulatory compliance and litigation under the Endangered Species Act. Chairman Inhofe mentioned the river shiner case, and my firm represents that coalition of 18 agricultural and ranching associations and water supply agencies that are challenging the designation of critical habitat for the Arkansas River shiner in Oklahoma, Texas, New Mexico and Kansas. That case is currently pending in the Federal district court in New Mexico.

If there is a theme to our practice, it is that you can be an advocate for economic development and the protection of species and that you can be a strong advocate for conservation and property rights. That is what we try to bring to the table. In my view, critical habitat has proven to be sort of a peculiar regulatory device. I agree with the Service in that given the other tools provided by

the ESA and other programs, the designation of critical habitat in most instances does not result in appreciable benefit to the species.

However, the one aspect of critical habitat that has been consistent is the cost that comes with it, the cost to affected land owners, the cost to the impacted communities and cost to the Service in terms of draining its limited resources. I will not tread on the same ground that was ably covered by Judge Manson, but I must say this. To me this is a very simple proposition. When you consider all of the things that we could be doing to protect and foster the recovery of endangered wildlife, and you consider all the time and energy that we're spending arguing over critical habitat in the courts, it seems very clear that the critical habitat component of the ESA must be addressed by Congress.

We supported S. 1100 during the 106th Congress and would support similar legislation if it were refiled by this Congress. Until reform is achieved, however, efforts to resolve this crisis are going to be limited by the parameters of current law. That is not to say there are no options within the existing framework, but ultimately the cycle of litigation and related drain on the Service's resources can only be remedied by statutory, rather than regulatory, reform.

In the meantime, I think that an interim solution would be a shift of the regulatory focus of critical habitat in a way that might bring it more into line with what Congress originally intended when it adopted the ESA, which is a tool to regulate impacts on specific areas that are truly essential to the conservation of the species. Essential is a key word in the statutory definition of critical habitat that I think gets lost in the shuffle.

The means to accomplish this shift is already available through what I call the Section 4(b)(2) balancing test that was recently resuscitated by the New Mexico Cattle Growers case. Section 4(b)(2) requires the Service to base a designation on the best scientific data available and to take into consideration the economic impact and any other relevant impact of specifying a particular area as critical habitat.

In defining critical habitat, I believe that Congress used the word essential for a reason. Critical habitat is not defined as all of the land and water that could be conceivably used in an effort to ensure conservation. The word essential carries with it a but for connotation. If these lands are not designated, conservation will not be possible. As Secretary Manson said, critical habitat is not supposed to be a perpetual hospice care for species, and I believe that critical habitat should be thought of as more part of the minimum essential building block for recovery.

For several years, my clients have been faced with critical habitat designations that did not seem to take the concept of essential into account. It is my belief that prior to the Cattle Growers case, there was no procedural Governor being used that forced the Service to focus on the essential part of the critical habitat definition. The river shiner case is one example. This led, in our view, to the designation of 1,150 river miles and nearly 90,000 acres of adjacent riparian zones across four States, was ill considered and not justifiable under the law.

A similar situation occurred in Arizona, where a large portion of the critical habitat designation that was referenced earlier for the

pygmy owl covers an area in northwest Tucson that is among the most valuable and desirable land for development that is among the least valuable areas for the owls' recovery. In both of these cases, the cost of designation in terms of potentially lost economic development opportunities, reduced property values, clouded entitlement, effects on existing operations and property and water rights, far outweighs the benefits to the species.

Just this week, however, the Administration provided an example of how a faithful application of the balancing test can work. There are nine species of cave dwelling invertebrates that exist solely within the confines of Bear County, Texas near San Antonio and the Texas hill country. The original critical habitat designation for those nine species covered about 9,500 acres.

After the proposal came out, the Service made a concerted effort to consider not just the potential economic impacts of the proposal, but also many other things that I believe fall within the catch-all all other relevant factors prescribed by the statute. The end result was that a designation was published in the Federal Register this week, on Tuesday, that encompasses in total only 1,500 acres, which is a substantial reduction from the proposal. I believe that this is proof that the balancing test can work.

I apologize for going over the limit, and I will answer any questions you may have.

Senator CRAPO. Thank you very much, Mr. Douglas.

Mr. Snape?

STATEMENT OF WILLIAM J. SNAPE, III, VICE PRESIDENT AND GENERAL COUNSEL, DEFENDERS OF WILDLIFE

Mr. SNAPE. Thank you, Mr. Chairman.

As you have heard this morning, Mr. Chairman, there are so many issues that emanate from a discussion of the critical habitat provisions in the Endangered Species Act. And as I begin my remarks, I'm going to try to concentrate on three main issues, given the time constraints.

I think overall, I have good news. And that is, for the most part, with a couple of significant exceptions, I have agreed with what has been said on this particular panel. If there is bad news, it is that I think there are some significant omissions and clarifications that I would like to make. I'll talk about those in my three points. And I want to thank particularly John Kostyack who gave very sound testimony, and it makes my job easier.

On the benefits of critical habitat, I guess ultimately I just fundamentally disagree that there are no benefits to critical habitat. That doesn't mean that critical habitat helps each species equally. I don't believe that either. For example, we're very involved with pygmy owl conservation in southern Arizona. What has happened in southern Arizona is that pygmy owl habitat protection has become in many ways, not totally, but in many ways a catalyst, a surrogate, almost, for a much broader conservation plan that protects upwards of 100 species.

Thus when you talk about the benefits and the costs of protecting the pygmy owl and its critical habitat, I think you've got to talk about all the benefits. I think Mr. Sunding only really had it half correct. The reality is that the pygmy owl critical habitat in south-

ern Arizona helps protect open space, which drives property values up near that open space, and it saves localities significant infrastructure costs from new fire houses, new roads, new utilities. And it helps a lot with water conservation in limiting out of control growth in southern Arizona, which is, as you know, quite dry.

There have been economic studies that bear these economic benefits out, and I think the Senator would be very much helped by taking a look at some of these different studies. Because I think what you're really hearing on the issue of ecological economics and economic analysis under the critical habitat provision is that ecological economics is a growing discipline, and there is a lot of good thinking going on right now, but I'm not sure that we have all the calculations down pat. I appreciated Mr. Manson's comments that, indeed, they're working on that.

So, point No. 1 is that I think, for at least some species, critical habitat unquestionably helps listed species, and indeed may help the local economics as well. Many local officials in southern Arizona support strong pygmy owl conservation.

The second point I want to make is that I think the New Mexico Cattle Growers' Association judgment is wrongly decided, and I think it's wrongly decided in a way that will harm the very economic interests that are now supporting it. The fundamental reason I think it is incorrectly decided is that it creates a second baseline of economic analysis that goes against even OMB's recitation of how these types of economic studies should be undertaken. Because what it now does is say, "Don't just look at the cost of critical habitat; look at the cost of critical habitat and listing in doing these economic analyses." I think that's the wrong way to go.

I think the confusion, and the reason why the court decided the case the way they did is that the Federal Government has been deciding these critical habitat decisions under the wrong standard. They have basically said that jeopardy and adverse modification are the same standard. Therefore, if you're treating them as the same standard, the economic analysis is going to show no appreciable impact.

So I think the problem with Cattle Growers is the standard that was being used to differentiate between jeopardy and adverse modification. The solution, I think, went overboard and I think is going to harm everybody. In fact, I think we're going to waste a lot of time and money doing complicated economic analyses that will really help no one in the real world. That is my take on what's going to happen as a result of Cattle Growers. And we're already beginning to see it right now.

I have 1 minute to go to make my third point, and that is, giving two more examples of species that could very much benefit by critical habitat, and that right now do not have critical habitat protection. One is the Sonoran pronghorn in southern Arizona. Less than 20 individuals, or about 20 individuals are left on the U.S. side of the border. We may see the extirpation of this species within the next several years.

And the other species, Senator, I picked from your home State, Idaho. That's the woodland caribou. As you may know, there are less than 20 woodland caribou on the U.S. side of the border. The

woodland caribou clearly needs all the help it can get. It is an old growth forest obligate species.

The point I want to end with on woodland caribou and the sort of creative thinking and "outside-the-box thinking" I think we need to do in critical habitat. I think the woodland caribou protection in the United States is very relevant to an issue that you may not think has a lot to do with critical habitat the U.S./Canada Softwood Lumber Agreement. The reality is that Canada is cutting down its its forests in woodland caribou habitat at a rate that is harming U.S. efforts to protect this species.

The only way, in my opinion, that you're going to deal with that economic dispute that's now underway is to have some sort of commonality with regard to the conservation baseline that the two countries are undertaking, and perhaps as outlandish as it might initially seem, a binational critical habitat proposal for this type of species, which would solve both economic and environmental problems. On that sort of dream note, I will end my testimony. I thank you, Mr. Chairman.

Senator CRAPO. Thank you, Mr. Snape. I'm sure you saw me smiling when you brought up the soft wood lumber agreement. I've just been appointed by the majority leader to be the co-chairman on the Senate side of the Canada–U.S. interparliamentary group or whatever it is which will be meeting this year to deal with a number of issues, not the least of which will be the Canadian soft wood lumber agreement. If your suggestion can help us resolve that issue, I'm going to look at it very hard.

Let me just toss out, I want to try to get into a couple of specific questions with each of you, but I also would like to get some interplay between the members of the panel on the overall issues here. But let me throw out a question at the outset to see whether we have some consensus building here. There's a lot of issues, obviously. But the core issue for the timing question of the designation of critical habitat it seems to me is one, from what I've heard, may not be one in which there's a lot of conflict. Is there any disagreement among the panelists as to whether it would be beneficial to allow the Service discretion in the timing of the designation of critical habitat? Would anyone disagree with a statutory change allowing that? Mr. Snape?

Mr. SNAPE. Mr. Chairman, like some of the groups that have already spoken, we also supported S. 1100 at the time it was introduced and discussed by this committee. The only point I would make about that particular bill and on the issue of timing is that the "deal" that we struck there was very closely negotiated. So if we were indeed going to go back to that, every word and semicolon mattered.

But with that caveat, no, I think that would be a rational and helpful change.

Senator CRAPO. Mr. Kostyack?

Mr. KOSTYACK. Two comments. One is, part of the deal, the package, was to deal with the backlog. Because one thing you don't want is to create a set of deadlines for critical habitat where the newly listed species actually leapfrog ahead of all those other species that have been waiting attention. That's a subtlety that will need to be dealt with.

The other comment I would make is that although we certainly support pushing back the deadline, giving the Service complete discretion on when to designate would be problematic. In fact, the deadlines were put in the Act in 1978, 5 years after the initial enactment of the Endangered Species Act, because for the first 5 years, there were no deadlines and virtually no critical habitat was being designated.

I think we know what happens when there are no deadlines whatsoever, we just need to adjust them and give the Service a little more time to get the science together.

Senator CRAPO. Thank you. Anybody else want to pitch in on that?

Mr. SNAPE. We agree with that.

Senator CRAPO. OK, thank you. I don't want to complicate matters, but I do want to—maybe it's just my curiosity wants to explore something. Mr. Kostyack, you actually brought up in the hearing we had three or 4 years ago. And you may recall in your testimony back in May 1999 that you referenced the concept of survival habitat, which was a notion that had come up, I don't know where it originated with it, but I associate it with the National Academy of Sciences National Research Council, which had studied this issue and had come up with the notion that—I'm probably going to do a bad job of characterizing the issue.

But if I understand what they were saying, it was that there were some benefits to critical habitat designation. There were also some serious problems with the timing and the way it was being done. And that perhaps we could create another concept called survival habitat, which would be more narrowly defined at an earlier stage and would identify sort of the core areas protected for survival, as opposed to what we are dealing with now in the critical habitat arena.

I know at that time you were kind of positive about that concept, Mr. Kostyack. Would you like to discuss that today and tell us whether we should leave that alone and go with what we've got, or the consensus we're building, or whether that's something we ought to look at?

Mr. KOSTYACK. I think it is something we ought to look at, if we can build consensus around it. The notion of survival habitat is, it does take several years after the listing of a species, which by the way is really not, a listing is not focused on recovery. A listing is focused on threats, how threatened is the species, do we need to give it immediate attention. So there is a lot of scientific work that needs to be done after the listing of a species. And I would argue, two or 3 years during the process of recovery planning is also the time to figuring out what habitats are going to be needed for recovery.

Now, in that interim period, what we don't want to have is major setbacks for the species, so basically we're boxing ourselves into a corner and limiting our options. So what can we do about protecting the habitat where there is broad scientific consensus, just to keep the species at its status quo, to prevent further slippage? Can we at least all get a consensus around this sort of core, basic habitat that there is no dispute about?

And then the tougher questions the scientists will need to resolve over that, say, 3 year period is, all right, to achieve true recovery, for which many species means restoring it to habitats where they're not found today they're in a severely depleted state, oftentimes, by the time they're listed—the tougher questions the scientists will have to wrestle with over the 3 year period is, what are going to be the recovery habitats. The survival habitats are a narrower concept I think you can get more immediate scientific consensus around.

Senator CRAPO. Anybody else want to jump in on this? Mr. Kightlinger.

Mr. KIGHTLINGER. Yes, Mr. Chairman. Our testimony had been about prioritizing habitat. We think that's a way of reconciling this survival habitat concept with what occurred in the New Mexico Cattle Growers Association case, where you can look at an economic analysis, try to do that cost benefit, and try to pick what's that essential habitat that we can look at first. It's the same kind of concept, and we'd like to see some developments there.

Senator CRAPO. Mr. Douglas?

Mr. DOUGLAS. I tend to agree with Mr. Kostyack on some level. I think we may have some disagreements about the scope of the habitat that may be necessary. But I do think that the concept of survival habitat is more appropriate for the regulatory context of listing and take, which is really based on threats, as he said, where the current notions of habitat preservation probably are more appropriately resolved in the recovery phase.

Senator CRAPO. Mr. Snape?

Mr. SNAPE. Mr. Chairman, I have two contextual comments. One is that if you did have a survival habitat process and a recovery, or a critical habitat process, you are creating two processes on habitat, which you can argue is not a good idea.

Senator CRAPO. Believe me, I understand that.

[Laughter.]

Mr. SNAPE. But the ultimate point I want to make is that the reason I like thinking this way, however you decide to deal with it from a legislative or regulatory point of view, is that it does focus on what I think needs attention for purposes of administering the Act right now, which is "survival" versus "recovery." Senator Thomas was talking about this, and the Yellowstone grizzly is a good example. Is that a population that we are just letting hang on and survive, or is it actually recovering. Well, scientists are disagreeing right now about that, and we've already talked about how that tension plays out in the Section 7 context.

So if we could actually more rationally talk about the concepts of survival and recovery in the Act, I think everyone's expectations would at least be a little bit more explicit. I think some of the conflicts under the Act occur because some people are talking about recovery and some people are talking about survival, and there's a little talking past each other. I think that happens in the critical habitat provision.

Senator CRAPO. Thank you. You have pointed out, I was almost reluctant to bring it up, because to bring up another concept to put into the Endangered Species Act, I'm sure, brings shivers down the spines of some of the people who are concerned about its com-

plexity at this point. On the other hand, there is a clear issue there, as to whether we can gain some benefit from some focusing of what we are trying to achieve at the respective stages of the implementation of the Act.

So I think it at least deserves some discussion. But we certainly do not want to create more complexity that would not help us facilitate and eliminate some of the problems that we are dealing with.

Mr. Kightlinger, you mentioned in your testimony the cost effectiveness framework for economic analysis of critical habitat. Could you explain a little more how that cost effectiveness framework would work, in your opinion?

Mr. KIGHTLINGER. We think what there probably should be is a public comment rulemaking process, so that people could get in and really get a methodology and a framework for how we analyze the economic impacts of this, that isn't really available today. That would hopefully then lead toward, we think, something along the lines of, and maybe we kind of agree, introducing new concepts is going to be difficult at this stage, but something where you can start prioritizing habitat, prioritizing, just setting priorities for the agencies, and doing that on an established process where you really do a cost benefit analysis, you really look at the impacts and the orderly way of what the impacts of designating habitat are we think could lead to a more cost effective approach.

Senator CRAPO. If I understand what you're saying correctly, that would not require legislation. That could be something that the Agency implements through rulemaking or otherwise.

Mr. KIGHTLINGER. That's right. We think either the Administration could do that of its own or certainly be directed by the legislature to do so.

Senator CRAPO. Mr. Snape, do you want to comment on that?

Mr. SNAPE. I want to follow up on that, because I think I largely agree. In fact, there's been some recent research lately, that shows that it's arguable that the economic analysis we're now doing "we" being the U.S. Government, and Americans, under the U.S. Endangered Species Act is more onerous and more complex than what Congress intended in 1978.

What she did, this Temple University professor, is look at the economic analyses that were required of other environmental statutes in the mid to late 1970's when these amendments were being drafted. That was well before the sort of formalized cost benefit analysis had come into fashion the way it is now. One could argue quite seriously that we have indeed gone overboard with our economic analysis, not in terms of getting accurate information. I think we all want that, but in terms of spending a lot of time and money creating telephone book analyses that no one reads and everyone fights about. It may be that we need to ask more fundamental questions about what we want the economic analysis to answer and be less focused on the sort of volume and formality that we seem to have inserted into the process. I'd be curious what Mr. Sunding thinks about that.

Senator CRAPO. Mr. Sunding.

Mr. SUNDING. Yes, thank you. I think I actually largely agree with that comment. The economic analyses that the Service, or

more accurately the Service's consultants tend to produce on these critical habitat designations are voluminous. They're quite large and quite detailed.

But to some extent I think they miss the point. Methodological problems aside, their aggregate analyses of the entire critical habitat and the entire set of economic impacts that result, they miss this point that the purpose of the economic analysis, at least as I understand it, is to help us prioritize. This land should be in, this land should be out because the economic impacts are just too onerous and the benefit to the species doesn't rise to the level that that land should be included.

So yes, I think there is a lot of scope to change the way we do the economic analysis.

Senator CRAPO. Mr. Sunding, could you tell me what you think the Fish and Wildlife Service's guidance on the economic impact analysis ought to look like?

Mr. SUNDING. Actually, I don't know if you know this or not, but I've actually worked with the Service to help them.

Senator CRAPO. I didn't know that, but that's good, that's helpful.

Mr. SUNDING. Right. And I guess we'll see what the outcome of that process is. I was engaged as one of, I believe two peer reviewers on a draft protocol for economic analysis.

And I'm sorry, your question was?

Senator CRAPO. The question is, what would you think that their guidance ought to look like? What should it be?

Mr. SUNDING. Well, I've outlined in my oral and my written testimony a number of types of economic impacts that can result from critical habitat designation. I suppose as a threshold matter I'd like to see a comprehensive analysis of those different types of impacts. The Service right now tends to focus on what I would characterize as being the most obvious or direct out of pocket impacts, just the cost of going through the Section 7 consultation process. What they tend to miss in general is the outcome of the Section 7 consultation process, the reduction in the size of the project, and the attendant market impacts and regional impacts.

The Service also, I think, recognizes but hasn't yet come to grips with the concept of delay. If you talk to people in the field, and I'm sure Mr. Kightlinger can verify this, if you talk to people in the field who have to deal with critical habitat designation, I think they'll tell you that one of the real problems with it is that it delays completion of the project. And that can impose very large costs on public agencies and private developers who are doing projects.

But also on consumers. It may be the case that you have a thousand unit housing project that gets cut down to 900 units as a result of a Section 7 consultation process. That imposes one kind of cost.

But the other kind of cost is that all the 900 units that do get built get delayed by some period of time. And what we've found in our theoretical and our empirical work is that those delay costs can be very large. In many case, they're the major component of all the economic costs from critical habitat designation.

Senator CRAPO. I wanted to shift back, I'm looking at some of my notes here, but Mr. Douglas, I noticed in your testimony the strong focus on trying to identify the essential habitat that we're dealing

with. In the context of the, what are we calling it, the survival habitat, do you think that that concept fits in the same vein as to what you were trying to get at?

Mr. DOUGLAS. I do. I think that the point I was trying to make and maybe didn't do so quite clearly was that the balancing test that's currently in the statute can be used as sort of an interim solution to get some control over the current litigation crisis, in that if the Service uses that test to really focus on only what is essential to the conservation of the species, it can narrow the scope of critical habitat designations and maybe reduce the field of things that we're fighting about.

A lot of these lawsuits, the responsive lawsuits by the regulated community that I represent were filed because the Service is kind of caught in this loop, they have a short amount of time to designate critical habitat, so you get this shotgun designation that covers hundreds of thousands of acres, it's not very focused. They don't have the time to look at the science correctly, they don't have time to consider the economic impacts adequately.

If that balancing test is faithfully employed and the Service has the time to really go through the steps of the process and do it right, then what you see is perhaps what happened with the Bear County cave bugs earlier this week. There were a couple of extensions to the comment period that were necessary, that were agreed to. But ultimately, they were able to perform those tasks in a manner that allowed them to consider the problem more deliberately than they're able to when they're forced to do it by litigation. I think that getting down to the essentials, whether it's in the context of critical habitat now or survival habitat, as you say, would be a very important tool process for them to follow.

Senator CRAPO. Mr. Kostyack.

Mr. KOSTYACK. If I could pick up on this, both the previous witnesses have indicated that the solution potentially is simply to go through the 4(b)(2) economic analysis process and address sort of the substantive impacts of critical habitat. As long as they are laying out on the table, what would be the impacts of critical habitat and then exclude habitats based on sort of the practical economic effects of that, then we potentially have a solution.

I've got a hitch in that, which is, we have this Sierra Club v. Fish and Wildlife Service case out there. And until the Service responds to that ruling and tells the world what adverse modification of critical habitat means, none of these economic impact analyses, all of them are going to continue to be subject to litigation, because we have this confusion out there, the Service is actually saying two different things at once. It says, on the one hand, we're going to expand economic impact analysis, talk about the impacts of critical habitat, at the same time, it's making this argument that well, critical habitat really doesn't mean anything, it's duplicative.

You can't have it both ways. The Sierra Club v. Fish and Wildlife Service case makes it, I think, abundantly clear, adverse modification of critical habitat is a standard that means something more than jeopardy. Until the Service responds to that ruling and says, the ruling is either right or wrong and here's our analysis, to go through the economic impact analysis and talk about what critical

habitat does, it's kind of a waste of time. Or at least it's going to create more confusion than it solves.

So I think the first step the Service needs to do is tell us what adverse modification of critical habitat means, in their view.

Senator CRAPO. Is this something that could be resolved by agency action, or does Congress need to step in and define this?

Mr. KOSTYACK. Well, it all depends on what the Service says. I think that yes, it can be solved by agency action. The Service needs to engage in a rulemaking right now. They have right now potentially two different rules. If you're in the Fifth Circuit, they cannot apply the existing regulation of adverse modification. If you're outside the Fifth Circuit, then you have discretion to do one or the other.

But what would make perfect sense would be to initiate a rulemaking at this point.

Senator CRAPO. Mr. Snape.

Mr. SNAPE. Senator, I would agree with John and raise the additional point that it really does depend on the species for what these economic analyses and what this adverse modification standard are going to look like. I think that's why, I'm not saying Congress should or should not, but Congress would find it difficult to adequately deal with an issue that at this point in time really does look different in every instance.

By way of example, and I just want to slightly disagree with my colleague to my immediate right, Mr. Douglas, but just to give you how this plays out in real world, there are about 18 pygmy owls left in southern Arizona right now, maybe a couple hundred in Mexico, but 18 adult pygmy owls in Arizona right now. About half of those owls are in northwest Tucson, which Mr. Douglas has said in his testimony today is not a big, important pygmy owl place.

Well, he and I obviously disagree as to how essential northwest Tucson is for the pygmy owl. But I think what's really happening when we disagree is that in the back of his mind, in the back of a lot of people's mind, they're saying, "That land's very expensive. It's worth a lot. We could make a lot of money developing that land." And that's really where the tension is right now, and it's not a tension over the Endangered Species Act, although that's how it's playing itself out. It's a tension in southern Arizona between the Home Builders, who obviously have a stake in this battle, versus the planners, who are trying to make some sense over Tucson not becoming another Phoenix.

And that's how these fights take place—with not a lot of individuals left, and with us fighting over the last scraps of habitat that by that point in time almost by definition are essential to the conservation of that species. And again, maybe reasonable people could agree to disagree. But I just want to point this out as an example that these are not easy questions sometimes, and they do not lend themselves to clear economic analysis as to what's even really best for the people of that State.

Senator CRAPO. Mr. Douglas, do you want to defend yourself there?

Mr. DOUGLAS. Absolutely. I think Mr. Snape is missing one point. And true, my clients are sitting there, and they're affected by this designation of critical habitat, and they're looking at a bot-

tom line. That's their perspective. What other perspective would anybody expect them to have?

But it's a lot more complex than just economics. It's an important factor in the process. It goes with that other, what I call a catch-all category, all other relevant factors. The decisions that are being made in northwest Tucson are not just about economics. They're about these other relevant factors. That is a highly urbanized area.

I think it's not ultimately valuable for the long term recovery of the owl, because the number of owls there, there's only one adult female, maybe four or five adult males, maybe fewer than that. And there's no opportunity for that area ever to become the kind of place where the owl could recover, that would significantly contribute to its recovery. That's where we disagree. It's not just about economics, it's about other things, too.

One final point in the vein that Mr. Snape was discussing, he talks about how it plays into the decisions of local planners and what they're trying to do, and how the informational value of critical habitat includes perhaps the protection of other species and what it's led to in southern Arizona with the Sonoran plan. That's where we get into a fundamental disagreement about the purpose of the Endangered Species Act. This is not an "uber-zoning" law. The Fish and Wildlife Service is not responsible for regulating land use. They're responsible for regulating endangered species. I think it's inappropriate and unlawful to use the Endangered Species Act as a land use control tool.

Senator CRAPO. Do you want to take a shot at that?

Mr. SNAPE. I will only say succinctly that the leading purpose, the first stated purpose of the Endangered Species Act, is to protect the ecosystems upon which listed species depend. I could say other things, but I'll just leave it at that.

Senator CRAPO. We don't want to start a boxing match here, because we have so much common ground we've identified already, and we want to keep focused on that. At the risk of, well, does anybody else want to comment on anything we've talked about so far? I've got another area I want to jump into.

I guess I just want to get into this one, not necessarily because it's something that we'll be focusing on in the legislation, I guess we could. But obviously the amount of litigation is one of the issues that has raised significant concerns about whether we're best utilizing our resources for the administration of the Act. In that context, the issue of the citizen suit provisions of the Endangered Species Act have been brought up.

Section 11(g) provides, I guess that's 16 U.S.C. 1540(g), for that reference, creates a private cause of action to enjoin violations of the critical habitat provisions and other provisions of the Endangered Species Act, and allows attorney fees in successful suits. And there has been the observation made that these citizen suit provisions are being utilized by groups that want to bring critical habitat lawsuits not so much because of the effort to protect the species or to further the best administration of the Act, but because there's a very high likelihood of prevailing and obtaining attorney fees.

So I guess the hard question to be asked is, do we need to do something about the high prevalence of litigation by addressing the citizen suit provisions, either the attorney fee provisions or the

availability of these easy lawsuits to file with regard to the Endangered Species Act? Mr. Snape? I saw hands go up on the whole panel here.

Mr. SNAPE. I don't think so, and let me give you three reasons and perspectives why that is, and I'll do so briefly. First, S. 1100 would deal with what I think the ultimate problem here is, setting a rational time line for the backlog. Ultimately, that's what S. 1100 sought to do and would have done. I think what you're seeing with the litigation is that a lot of species are deserving of critical habitat and because of the resource crunch aren't getting it. The way you deal with that is to cut a deal. A deal, I might add, similar to what Secretary Norton cut with the Center for Biological Diversity, hardly can inside the beltway group, on multiple listings about a year and a half ago. It can be done if we put our attention to it. I'd say that about the backlog.

The second thing I'd say is that I know I'm personally involved in four lawsuits right now where I'm on Mr. Manson's side. I've become a defendant intervenor in cases where industry is suing against critical habitat. So I don't know how many of his numbers included industry suits, but they are growing and have done so since the Bush Administration took office. So it's not just environmental groups bringing these suits.

The third thing, and it ties everything together is that we would very much appreciate having a discussion with Mr. Manson and Steve Williams and the whole team over there, and at Commerce as well—for the marine species and on their priorities under the Act. I mean, I talked to you about the woodland caribou, which has less than 20 individuals on the U.S. side of the border. As far as I can tell, that is not yet a super-high priority at the Department of Interior. I would take their lecture on prioritization a little bit more seriously if indeed it was accompanied with their own prioritization scheme. Ultimately, though, I agree with Mr. Manson that we have to agree on how to spend scarce resources. We can't spend resources fighting about that. Ultimately, I'm sure that's what you're getting at there are other perspectives here.

Senator CRAPO. Why don't we just go from right to left, anybody who wants to pitch in on this. Mr. Douglas.

Mr. DOUGLAS. I don't question the motives of interest groups that file these suits under the Endangered Species Act. I think their motives are pure. I've certainly never been involved in any case where I thought that there was a profit motive for filing a case because you could recover your fees.

That having been said, I think it is ironic in that the Fish and Wildlife Service is currently at least partially crippled by litigation and the Federal Government is funding a lot of these lawsuits. If you want to at least make the process, I don't want to say harder, but at least make it such that before you file a lawsuit, you'd better be real thoughtful about it, and in the event that the ability to recover fees might be more of an enticement to go ahead or less of a barrier to go ahead, then you might make it, making it a little harder to recover fees might slow it down just a little bit.

If that can't occur, then I think it ought to be a little more equitable. I know that the perception is that industry groups are better funded or well funded and they have a harder time recovering their

fees. So at the risk of spitting in the trough, I don't want to make it too hard for some of my clients to be able to recover as well.

I agree with Mr. Snape wholeheartedly, for a change, that we should not alter the provisions that allow private parties access to the courts under the ESA. I too, within the last 12 months, have been intervenor on the side of the Fish and Wildlife Service in a lawsuit, and I would not have had the opportunity to do that and help them defend an agency action, actually we've done this twice in the last year, but for that provision of the ESA. So I don't think that that needs to be altered.

Senator CRAPO. OK. Mr. Kostyack.

Mr. KOSTYACK. Well, I'll just try to pick up on points that have not yet been made, because I agree with most of the comments that have been made on this question.

First of all, I think it's important, Senator, for you to understand that there are two different types of Endangered Species Act lawsuits. Only some of these lawsuits are brought pursuant to the ESA citizen suit provision. Those are the deadline cases. A high percentage of the cases, and I think an increasing number of the cases, are brought pursuant to the Administrative Procedure Act, which has no attorney fee provision, by the way.

Senator CRAPO. Right.

Mr. KOSTYACK. So maybe you understood this already, I didn't mean to suggest you didn't, but the point that ought to be understood is, if you're looking at the citizen suit provision, then you're really talking about deadline cases. I think that really is where the heart of the problem is. I don't think Congress wants to even contemplate going down the road of limiting the ability to sue over arbitrary and capricious Government action. Because obviously both sides of this debate use that quite a lot.

On the citizen suit deadline provisions, obviously there has been a problem. We've had a lot of litigation. And it's created a backlog and it has affected the Service's ability to set its own priorities. How do we solve that problem? Does it require Congress to intervene, or can it be solved by the Administration? I would argue that the Administration has it easily within its authority to solve this problem today, or within a matter of weeks.

We've talked about this over a number of years, and I really think we can make this happen, which is simply a matter of sitting down with the various groups, interest groups on both sides, laying out its own prioritization schedule, and my guess is the interest groups would defer to the services and their expertise on that issue.

If they were able to do that and lay down all these critical habitat designations that are in the pipeline and come up with their own prioritization schedule, get everybody to sign on the bottom line and simply say, we will abide by this prioritization schedule, and we will all support you, the Administration, to go to Congress to get the funding to get this critical habitat designation process completed, this problem would be over. We have devoted enormous resources from the Government, not just paying attorneys fees, but the Government's own resources in terms of its own lawyers, staff biologists, agency directors preparing affidavits. It is really absurd.

But it is not a problem that is unsolvable. In fact, the solution has been staring at us for years, and it really just requires a few individuals willing to roll up their sleeves and make it happen.

Senator CRAPO. Mr. Kightlinger.

Mr. KIGHTLINGER. Yes, Mr. Chairman. Most of the points have already been made. Our view, at least in the Endangered Species Act field is that most of this litigation is driven less by fees and more on this prioritization issue, which is a point others have made. It's different, and we have a law in California, Proposition 65, we call it, which requires warning labels about cancer causing substances to be slapped on virtually everything. That has generated a whole spate of lawsuits. That is really all about attorneys fees, primarily, more than it is about getting labels on glasses of water.

But I don't see that so much in the Endangered Species Act field. It's been the prioritization and the timing issues. We think if those are addressed, you'll see a ratcheting down of the lawsuits.

Senator CRAPO. All right, thank you.

All right, gentlemen, I'm through with my questions. I have more questions, but I have also run out of time. Actually, I like it when not a lot of the other members show up, because I get to ask more questions.

[Laughter.]

Senator CRAPO. I would appreciate it if, as we cull through some of our paperwork here, if we find things we wish we would have asked, if you would respond in writing if we can submit some information to you. I want to just say thank you to all of you for your testimony and your interest in and support of our efforts to find a path forward here. I'm very pleased that we have been able to find what seems to be some common ground on which we can hopefully build another path forward, and get past the road block we ran into in the Senate last time and get this done.

As you know, I'm planning to go beyond the hearing stage and develop legislation on this. We want this to be bipartisan, and we want it to be supported broadly. One of the reasons that we have focused on this issue first is not only because it's one of the more significant issues that we are dealing with on the Endangered Species Act, but it's one of those where we have the ability to find some common ground and build the support to get something done.

So I most importantly appreciate your willingness to help us achieve that objective. And with that, this hearing is concluded.

[The prepared statement of The American Farm Bureau Federation, submitted for the record, follows:]

[Whereupon, at 11:22 a.m., the subcommittee was adjourned, to reconvene at the call of the chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF CRAIG MANSON, ASSISTANT SECRETARY FOR FISH AND WILDLIFE AND PARKS, DEPARTMENT OF THE INTERIOR

Mr. Chairman, I appreciate this opportunity to testify today on the state of the U.S. Fish and Wildlife Service's Endangered Species program as it relates to critical habitat designations.

Let me begin by saying that the Department of the Interior (Department) and the U.S. Fish and Wildlife Service (Service) are committed to achieving the primary purpose of the Act the recovery of threatened and endangered species, and improving the efficiency and effectiveness of the Endangered Species Act (ESA). We also be-

lieve that conservation of habitat is vitally important to successful recovery and delisting of species.

Designation of critical habitat has been a source of controversy and challenge for many years. As I will point out in this testimony, simply seeking additional funding for this program is not the solution. The Department and the Congress must work together to determine how to get the most value for species conservation out of the Federal resources devoted to the endangered species listing program.

Background

For well over a decade, encompassing four separate Administrations, the Service has been embroiled in a relentless cycle of litigation over its implementation of Section 4 of the ESA. The underlying premise of those cases has been a dispute between the Service and numerous private litigants over the proper allocation of the limited funds appropriated by Congress to carry out the numerous petition findings, listing rules, and critical habitat designations mandated under the rigorous deadlines in Section 4. The Service now faces a Section 4 program in chaos not due to agency inertia or neglect, but due to limited resources and a lack of scientific discretion to focus on those species in greatest need of conservation.

For many years the Service has been unable to comply with all of the non-discretionary deadlines imposed by Section 4 of the ESA for completing mandatory listing and critical habitat (listing program) actions within available appropriations. The majority of private litigants have therefore repeatedly sued the Service because it has failed to meet these non-discretionary deadlines. These lawsuits have subjected the Service to an ever-increasing series of court orders and court-approved settlement agreements, compliance with which now consumes nearly the entire listing program budget. This leaves the Service with little ability to prioritize its activities to direct scarce listing resources to the listing program actions most urgently needed to conserve species.

Moreover, the accelerated schedules that often result have left the Service with almost no ability to confirm the scientific data in its administrative record before making decisions on listing and critical habitat proposals, without risking noncompliance with judicially imposed deadlines. Finally, it has fostered a second round of litigation in which those who fear adverse impacts from critical habitat designations challenge those designations. This cycle of litigation appears endless, is very expensive, and in the final analysis provides relatively little additional protection to listed species.

Extensive litigation has shown that the courts cannot be expected to provide either relief or an answer, because they are equally constrained by the strict language of the ESA. The Department of Justice has defended these lawsuits and sought to secure relief from the courts to allow the Service to regain the ability to prioritize the listing program according to biological need. Almost universally, the courts have declined to grant that relief. In 1999, the U.S. Court of Appeals for the Tenth Circuit held that the Administrative Procedure Act, 5 U.S.C. §706, does not afford district courts with the discretion to refrain from ordering the Service to complete listing and critical habitat actions immediately when an absolute statutory deadline is being violated. Following that decision, no district court has deferred to the Service's system of prioritization and refrained from issuing an order where a deadline is at issue. We have twice appealed decisions to the U.S. Court of Appeals for the Ninth Circuit in an attempt to obtain a ruling that the courts have discretion to decline to issue an injunction when the Service has failed, due to resource constraints, to comply with a listing program deadline. Both attempts have been unsuccessful thus far.

Nevertheless, a number of courts are now recognizing the obvious that there is a conflict between the ESA and the listing program appropriation, and that Congress has the ability to resolve this conflict. For example, last year Judge Paul Kelly ordered the Service to make an overdue petition finding within 30 days. Judge Kelly stated in his opinion in Center for Biological Diversity v. Norton, No. CIV 01–0258 PK/RLP (ACE), however, that:

> The court recognizes that the Secretary is caught in a quandary. Without sufficient funding or a change in the tasks required by Congress, the Service cannot fulfill the myriad of mandatory listing duties. . . . Lawsuits follow, requiring the Service to spend a greater portion of its already insufficient budget on litigation support. . . . More lawsuits will inevitably follow unless Congress recognizes the problem it has created and acts to solve the problem, either by appropriating additional funds, amending the time limits or by giving the Secretary the discretion to prioritize her workload. Until Congress does, tax dollars will be spent not on or protecting species, but on fighting losing battle after losing battle in court. The solution to this problem lies not with the courts, but with Congress.

Other courts have agreed with Judge Kelly. Simply put, the listing and critical habitat program is now operated in a "first to the courthouse" mode, with each new court order or settlement taking its place at the end of an ever-lengthening line. We are no longer operating under a rational system that allows us to prioritize resources to address the most significant biological needs. I should note that it is a direct result of this litigation that we have had to request a critical habitat listing subcap in our appropriations request the last several fiscal years in order to protect the funding for other ESA programs.

The tension between the requirements of the listing program and resources is not new. It is already clear that the next Administration will be affected, because even at this point, critical habitat budgets into Fiscal Year 2008 are being dedicated to compliance with existing court orders and court-approved settlement agreements.

In short, litigation over critical habitat has hijacked our priorities. The Service's listing program's limited resources and staff time are being spent responding to an avalanche of lawsuits, and court orders focused on critical habitat designations. We believe that this time could be better spent focusing on those actions that benefit species through improving the consultation process, the development and implementation of recovery plans, and voluntary partnerships with States and private landowners.

In the past, this committee has proposed legislation, which the previous Administration supported, to move critical habitat designations to the recovery phase of the ESA. We recognize that this is one of a number of potential solutions by which Congress could address this difficult problem. We welcome the opportunity to work with the committee to craft a solution that meets wide approval.

As I previously noted, this is not a new problem. In previous testimony before this committee, then–Director Jamie Clark noted that in 25 years of implementing the ESA, the Service had found that the designation of statutory critical habitat provided little additional protection to most listed species, while consuming significant amounts of scarce conservation resources. It was based on these beliefs that the Service found in most cases designation of critical habitat "not prudent" under the ESA.

Like Clark, we believe that listing also invokes the Section 4 recovery planning process, the Section 9 protective prohibitions of unauthorized take, Section 6 funding to the States, and Section 7 Federal agency responsibilities. The Service believes that it is these measures that may make the difference between extinction and survival for many species.

Most important, our efforts to respond to listing petitions, to propose listing of critically imperiled species, and to make final listing determinations on existing proposals are being significantly delayed. There are species not yet listed in Regions or geographic locations where litigation support has and will continue to consume much of our funding resources. For example in Hawaii, a single court order remanded 245 "not prudent" critical habitat determinations.

Congress added the strict deadlines to the ESA to ensure that listing actions are completed in a timely manner. However, absent some measure to allow for a rational prioritization of the workload based on a consideration of the resources available, those strict deadlines have instead led to our current untenable situation where high priority listing actions may be indefinitely delayed. It cannot be overstated that managing the endangered species program through litigation is ineffective in accomplishing the purposes of the ESA.

The Listing/Critical Habitat Backlog

The Service has, in addition to the critical habitat designations already required by court order, 158 backlogged critical habitat actions. There are also 257 candidate species on which the Service has enough information to propose listing, but listing is precluded by other, largely court-ordered, higher priority actions. We also have about 40 yet-to-be-dealt-with petitions. The listing backlog is too large to eliminate completely over a 1-or 2-year period. The Department has asked for a substantial increase, of $3.3 million, for Fiscal Year 2004, but this increase would solely address expected court-driven obligations. It would not help to address the backlog. As of March 31, 2003, the Service litigation workload was as follows 31 active lawsuits with respect to 32 species and 26 notices of intent to sue involving 27 species.

Economic Analysis

In contrast to the listing provision, Section 4(b)(2) of the ESA requires that the Secretary should take into consideration the economic impact of the critical habitat designation and any other relevant impacts before specifying any particular area as critical habitat. Hence, an economic analysis is part of the process of designating critical habitat. Section 4(b)(2) also provides a balancing mechanism the Secretary

is given broad discretion to consider the economic impacts of any proposed critical habitat designation and exclude areas where she finds that the benefits of exclusion outweigh the benefits of designation. This requirement for balancing enables the Service to exclude an area (i.e., a critical habitat unit, or part of a unit) from a designation when the benefits of exclusion outweigh the benefits of inclusion, if the exclusion would not result in the extinction of the species.

In a case brought by the New Mexico Cattlegrowers Association, the Tenth Circuit Court of Appeals held that the Service must examine "all the costs of critical habitat whether or not they are coextensive with listing." The Service now requires that all economic analyses conducted for critical habitat designation apply this standard.

Habitat Protection and Critical Habitat Designation

It has been our view that areas not in need of special management considerations or protections are outside the definition of critical habitat. For that reason, we exclude from critical habitat areas covered by plans that adequately manage for the species concerned. In recent rules, exclusions have included lands covered by Department of Defense Integrated Natural Resource Management Plans, areas with active Habitat Conservation Plans approved by the Service or by the National Marine Fisheries Service, and those with other management plans, including those of private landowners.

We believe this policy is consistent with Secretary Norton's cooperative approach to conservation. With regard to critical habitat, as well as in other areas, we are continually working to find new and better ways to encourage voluntary conservation initiatives. Cooperative conservation of fish and wildlife resources is critical to maintaining our Nation's biodiversity. A proactive, preventative approach based on incentives could harness the voluntary spirit of the public to help stem the tide of species extinction.

The Service currently has many conservation tools available which provide for close cooperation with private landowners, State and local governments, and other non–Federal partners and that are particularly important in our implementation of the ESA. For example, through the Candidate Conservation program, the Service can work with the States, landowners, and others to voluntarily conserve candidate and other declining species. It is with these species that we have the greatest flexibility in supporting our mutual partners on proactive conservation actions. Thus, a collaborative approach to conservation might result in removing the threats that necessitate listing. Similar to preventative medicine that hopes to save patients from the need for expensive procedures, hospitalization, or even a trip to the emergency room, species can be protected by interested partners working with the Service before they need the protections of the ESA.

Conservation efforts on non–Federal property are also essential to the survival and recovery of many listed endangered and threatened species. The majority of the Nation's current and potential threatened and endangered species habitat is on property owned by non–Federal entities. The Service strongly believes that collaborative stewardship involving the proactive management of listed species is the best way to achieve the ultimate goal of the ESA that is, recovery of threatened and endangered species. The recovery of certain species can benefit from short-term and mid-term enhancement, restoration, and/or maintenance of terrestrial and aquatic habitats on non–Federal property.

Safe Harbor Agreements (SHA) provide a means to garner non–Federal property owners' support for species conservation on their lands. They allow for flexible management by providing assurances to private landowners who implement conservation measures for listed species that their actions will not lead to additional ESA restrictions. SHAs have contributed significantly to the conservation of the red-cockaded woodpecker in the southeast as well as other species inhabiting private lands.

Through other programs such as the Landowner Incentive Program, the Service provides financial assistance to partners interested in implementing conservation actions that benefit listed and other imperiled species on non–Federal lands. These programs reflect our belief, mentioned above, that the conservation of listed species and their habitat depends on the cooperative participation of non–Federal partners. These programs, which require non–Federal cost-sharing participation, reflect our strong commitment to conservation through cooperation, communication, and consultation with our private, State, and other non–Federal partners.

The Habitat Conservation Planning Program provides a flexible process for permitting the incidental take of threatened and endangered species during the course of implementing otherwise-lawful activities. The program encourages applicants to explore different methods to achieve compliance with the ESA and to choose the approach that best meets their needs. Perhaps the Program's greatest strength is that

it encourages locally developed solutions to listed species conservation while providing certainty to permit holders. Through this process of consultation and cooperation with our partners, the Program helps provide for the conservation of listed species on non–Federal land throughout the country.

These tools are important in our implementation of the ESA. As noted above, we view lands where these programs provide for species conservation and management as not in need of critical habitat designations.

However, a recent court case in the District of Arizona has cast doubts on our policy to exclude these lands from critical habitat based on these types of agreements and plans. In a case relating to Forest Service lands, the U.S. District Court in Arizona ruled that this interpretation is incorrect, and found that the fact that lands require special management necessitates their inclusion in, not exclusion from, critical habitat.

Although the decision is limited to the jurisdiction of that court, it may negatively impact our future ability to use this policy elsewhere. The Service uses other methods besides this policy. For example, Section 4(b)(2) of the ESA allows the Department to exclude areas if the benefit of exclusion outweighs that of inclusion as long as it does not result in the extinction of the species. However, our possible inability to exclude lands with approved conservation agreements from critical habitat could serve as a powerful disincentive for landowners to enter into such agreements.

I would also note that this policy has been applied to military lands with an approved Sikes Act Integrated Natural Resources Management Plan which addresses the needs of the species in question. As discussed in testimony before the committee last week, the Administration has proposed codifying the policy on excluding military lands from critical habitat based on these plans to reduce future litigation and challenges and provide more flexibility to the Department of Defense.

Summary

The present system for designating critical habitat is broken. A process that provides little real conservation benefit consumes enormous agency resources and imposes huge social and economic costs. Rational public policy demands serious attention to this issue in order to allow our focus to return to true conservation efforts. We are prepared to work with Congress to identify ways of providing necessary legislative relief.

Mr. Chairman, this concludes my prepared testimony. I would be pleased to respond to any questions you and other members of the subcommittee might have.

RESPONSES OF CRAIG MANSON TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. How many court cases have been brought since 1998 concerning critical habitat?

Response. There have been 80 cases brought against the Fish and Wildlife Service (Service) since 1998 concerning critical habitat issues.

Question 2. How much in attorney fees, and to whom, has the Department paid as a result of critical habitat litigation?

Response. In almost all instances, attorney fees in critical habitat cases are paid from the Judgment Fund in the U.S. Treasury, not by the Department. However, our review has revealed several recent cases, which were consolidated and settled, where the Department has directly paid attorney fees as a result of critical habitat-related litigation. These include Middle Rio Grande Conservancy District v. Norton; Forest Guardians v. Norton; and State of New Mexico, et al. v. Norton, which all related to critical habitat for the silvery minnow. In this matter, fees totaling approximately $38,895.00 were paid from the Service's budget to cover fees incurred by Forest Guardians and the New Mexico Farm and Livestock Bureau.

Question 3. What percent of Endangered Species program employees' time is spent working on critical habitat-related litigation work items?

Response. The Endangered Species Program has approximately 44 full time employees responsible for critical habitat work. If we assume that litigation-related work includes litigation support and compliance work, then all of these 44 FTEs devote 100 percent of their time on critical habitat litigation-related work. This is approximately 3.7 percent of Endangered Species Act program employees.

Question 4. Can the FWS effectively use the economic impact analysis to produce realistic assessments and exclusions?

Response. Yes, the Service does effectively use economic analyses when considering exclusions. Under section 4(b)(2) of the Endangered Species Act, the Secretary has the responsibility to designate critical habitat on the basis of the best scientific data available and, after taking into consideration the economic impact and any

other relevant impact, to specify any particular area as critical habitat. The Secretary may exclude an area from critical habitat if it is determined that the benefits of exclusion outweigh the benefits of specifying it as critical habitat as long as the exclusion does not render the species extinct.

The economic effects examined in our analyses include direct costs that result from compliance with section 7 of the Act, such as the administrative costs of completing informal and formal consultations with the Service, the project modification costs that may occur as a result of these activities, and other costs arising under the Act. The analyses also evaluate indirect effects of the designation, such as costs of project delays and regulatory uncertainty, and costs associated with changes in implementation of other laws (e.g., the California Environmental Quality Act). These are the steps followed in an analysis:

- Describing current and projected economic activities within and around the proposed critical habitat area;
- Identifying whether such activities are likely to involve a Federal nexus;
- For activities with a Federal nexus, evaluating the likelihood that these activities will incur costs associated with the designation, even if those costs are also associated with other elements under the ESA;
- Estimating the direct costs of expected section 7 consultations, project modifications, and other economic impacts associated with the designation;
- Estimating the likelihood that current or future activities may require additional compliance with other Federal, State, and local laws as a result of new information provided by the designation;
- Estimating the likelihood that projects will be delayed by the consultation process or other regulatory requirements triggered by the designation;
- Estimating the likelihood that economic activities or property values will be affected by regulatory uncertainty;
- Estimating the indirect costs of the designation, as reflected in the cost of compliance with State and local laws, project delays, regulatory uncertainty, and effects on property values;
- Assessing the extent to which critical habitat will create costs for small businesses as a result of modifications or delays to projects; and
- Assessing the effects of administrative costs and project modifications on the supply, distribution, and use of energy.

The Service and the Department then use this analysis, as well as information relating to non-economic impacts, to determine whether there are any areas where the benefits of excluding the area from critical habitat outweigh the benefits of designating the area as critical habitat. If the benefits of exclusion outweigh the benefits of designation, the area may be excluded as long as the exclusion does not render the species extinct.

Question 5. Does the inclusion of impacts on critical habitat in the consultation process under section 7(a)(2) provide protection for a listed species over and above the jeopardy standard? If so, in what way? In one case, the Fifth Circuit found the "definition of the destruction/adverse modification [of critical habitat] standard to be facially invalid." Sierra Club v. U.S. Fish and Wildlife Service, 245 F.3d 434 (5th Cir. 2001). How does the FWS plan to respond? Can the agency realistically assess effects on recovery?

Response. In 30 years of implementing the Act, the Service has found that in most instances, critical habitat designations add little protection above that provided by the jeopardy standard under section 7(a)(2) of the Act. There are limited circumstances in which additional protection is provided. The most evident of such circumstances is when a critical habitat designation includes an area outside the current range occupied by the species. Consultation likely would not occur in these areas under the jeopardy standard because the trigger for consultation is that species "may be present." Therefore, any project modifications that result from new consultations that occur because of the critical habitat designation are conservation activities that would likely not have occurred but for the critical habitat designation. However, because Congress directed that designation of critical habitat in unoccupied areas be "exceedingly circumspect," this is not likely to be a significant issue. The Department, in cooperation with the Department of Commerce, is developing a proposed regulation to address the 5th Circuit's 2001 opinion.

The Service believes that it can assess the effects on recovery. Generally, among the common effects of proposed Federal actions are that the likelihood of achieving recovery will be delayed or precluded due to direct or indirect effects of the action. Actions that preclude recovery of a species mean the species will remain vulnerable to extinction; actions that delay the achievement of recovery mean the species is

subject to the types of threats that caused its listing for a longer period of time than otherwise necessary.

Question 6. Currently, FWS is required to prepare the appropriate analysis under the National Environmental Policy Act for designations of critical habitat in areas under the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit. Is FWS considering how to merge this with the economic analysis? Is this just another example of the costs far exceeding the benefits of designation?

Response. In most cases, the Service produces an Environmental Assessment as the National Environmental Policy Act (NEPA) compliance document for critical habitat designations in the Tenth Circuit. In cases where an Environmental Impact Statement is done, the Service uses the assessment of economic impacts under NEPA as the economic analysis for critical habitat designation. In other words, we have consolidated the processes for critical habitat designation in the Tenth Circuit.

Question 7. I understand that FWS relies on "primary constituent elements" to delineate the specific critical habitat within designated boundaries. How does this help others to know whether they are affecting the habitat? How is a Federal agency able to consider the effects on an unknown area? Doesn't this leave the presence of critical habitat up to the opinion of individuals on FWS staff?

Response. Primary constituent elements are specifically identified biological and physical features—specific plants, presence of water, etc.—that must be present for the species to exist in an area. Most Federal agencies have or can readily contract for the expertise needed to determine if these elements will be affected by the agency's action. If primary constituent elements are affected by the proposed action, the agency will initiate consultation with the Service.

Insofar as the presence of critical habitat is concerned, the boundary of every critical habitat unit is depicted on maps readily available to anyone, and those boundaries are determined by a rulemaking process which includes public review and comment on draft maps and descriptions of the primary constituent elements. Once final critical habitat is officially designated, there should be nothing unknown or dependent upon the individual opinion of Service staff as to its location or the nature of the primary constituent elements. In addition, along with the notice to designate critical habitat, we publish a description of actions which might constitute adverse modification of the proposed critical habitat designation.

Question 8. With increasing acreage in critical habitat designation, and the increasing pressure to make to put more teeth in the application of critical habitat to Federal activities (which includes private activities funded or permitted by the Federal Government), is the FWS in danger of becoming a Federal land use control agency?

Response. As noted previously, almost all critical habitat is already occupied by listed species. Accordingly, consultation under Section 7 of the ESA would be required for Federal activities in areas occupied by the species even without the critical habitat designation, and designation does not significantly increase the Service's role in reviewing Federal activities.

Question 9. What percentage of the area designated as "critical habitat" in the United States is on privately owned lands?

Response. The Service does not have the percentage of critical habitat that fits any particular land ownership available at this time. Many critical habitats overlap, so merely adding numbers from individual designations would not provide an accurate answer. The Service is developing a plan to enter its designated critical habitat map coordinates into a national GIS data base. This data base could help determine, without double counting areas, the percentage of land ownership areas designated as critical habitat. The Service would also be able to provide critical habitat data to the Administration's Geospatial One-Stop Initiative, led by the Department's U.S. Geological Survey (USGS) and the USGS internet map server, NationalAtlas.gov, thus making critical habitat information more accessible to affected and interested entities.

Question 10. What arrangements does the Department have to compensate private landowners for loss of value or loss of use when their lands are included in a critical habitat area?

Response. While no courts have ruled that designation of critical habitat is a taking under the Fifth Amendment and, thus, no just compensation is required for such designations, because half of all endangered species have at least 80 percent of their habitat on private lands, we believe that providing incentives to and active collaboration with private land owners is an important component of species protection.

We provided a brief description of some of our collaborative and incentive-based activities in our statement for the April hearing before your subcommittee. These include incidental take permits and Safe Harbor Agreements, conservation banking,

the exclusion from critical habitat areas covered by plans that adequately manage for the species concerned, and various grant programs.

Question 11. What "special management considerations or protection" might be considered for lands included within the critical habitat of a species? Have any "special management considerations or protection" ever been implemented on any critical habitat lands? If these lands are privately owned lands, what arrangements does the Department make to ensure that these landowners are not penalized for any restrictions on use that may result from these "special management considerations?"

Response. Within the geographical area occupied by the species, the Act establishes two requirements for an area to be considered critical habitat. The area must contain features that are essential to the conservation of the species, and it must be true that those features may require special management or protection. Protection or management might include such activities as protecting riparian corridors, or providing for habitat restoration. However, the law does not impose on any landowner an obligation to undertake any conservation activities.

The fact that the critical habitat designation does not automatically result in any special management being undertaken and, in the case of private landowners, generally acts as a disincentive to conservation management, is the major reason we believe the critical habitat process, as currently established, results in little if any benefit to the species.

RESPONSES BY CRAIG MANSON TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Is it the position of the Administration that Congress should eliminate the ESA's critical habitat protection? If Congress were to take this step, what mechanisms would remain in place to ensure that habitats needed for species recovery are protected?

Response. It is not the position of the Administration that Congressshould eliminate the ESA's critical habitat protection. The Administration looks forward to working with Congress to develop a workable solution to the current breakdown. For example, one option that has been proposed would move the requirement to designate critical habitat from the time of listing to the time of recovery planning and make it non-regulatory, as in the Chafee-Kempthorne bill, S. 1100, which was introduced in the 105th Congress. With that change, the determination of which areas are important for a species' recovery would become a part of the recovery planning process, enabling the Service to determine a species' habitat needs at a time when there is a greater knowledge base about the species than at the time of listing. However, there are undoubtedly other alternatives which would also productively address this situation, and we welcome a chance to work with you to explore these.

We acknowledge that protecting habitat is essential to achieving recovery for many listed species. But both this Administration and the previous Administration have found that critical habitat designations add little, if any, benefits to the species. For example, the ESA requires consultation for activities that may affect listed species, including habitat alterations, regardless of whether critical habitat has been designated. We have also learned over time that, in almost all cases, active management of the habitat is far better than the "do no harm" requirement accompanying a critical habitat designation. However, because many landowners and land managing agencies strongly oppose critical habitat designations, the current critical habitat process has proven counterproductive to meeting the real needs of the species in many instances.

A significant problem is that the original ESA mechanism designed to address this, critical habitat designation, cannot produce the management needed. Active cooperation cannot be compelled by this regulatory scheme. Instead, we believe far better results can be achieved by developing and promoting cooperative conservation efforts between landowners and land managers.

Question 2. Does the Administration intend to issue a new regulation defining adverse modification of critical habitat as called for by the Fifth Circuit decision in Sierra Club v. U.S. Fish and Wildlife Service? If so, when will this regulation be proposed and finalized? In the meantime, what standard of protection of critical habitat is being used by the Administration in the Fifth Circuit?

Response. The Administration is developing a proposed rule that would address the Fifth Circuit's decision. Presently in the Fifth Circuit, in evaluating whether the effects of a proposed action constitute destruction or adverse modification of critical habitat, we analyze whether the effects of the proposed action appreciably diminish the value of the critical habitat for the recovery of the species.

3) Does ESA §4(b)(2) give the U.S. Fish and Wildlife Service (FWS) the flexibility to exclude Defense Department lands from a critical habitat designation based on the existence of an adequate Integrated Natural Resource Management Plan (INRMP)? If so, what factors does FWS consider in determining whether an INRMP conserves listed species adequately enough to justify a ESA §4(b)(2) exclusion?

Response. Section 4(b)(2) allows the Service to exclude DoD lands based on the existence of an adequate INRMP, or their importance to national security, or other relevant reasons under which the benefit of excluding the lands from critical habitat might exceed the benefit of including them. However, this is an action which is discretionary. The Department of Defense is seeking certainty, and we agree that this is warranted.

Question 4. Have the courts interpreting ESA §4(b)(2) placed any limits on the U.S. Fish and Wildlife Service's ability to exclude habitats from critical habitat designations pursuant to this provision of the ESA? If so, please describe those limits. If not, please explain why ESA §4(b)(2) is an inadequate tool for substituting an INRMP for a critical habitat designation when FWS deems it appropriate.

Response. The courts have ruled that the Secretary's ability to exclude areas under section 4(b)(2) is discretionary. Under the applicable standards, as long as proper procedures are followed and there is a rational basis on the record for the decision, we would not expect a court to overturn a 4(b)(2) exclusion, whether related to INRMPs or other factors. However, as noted above, this is an action which is discretionary, while the Department of Defense is seeking certainty.

Question 5. Please estimate the cost of cleaning up the backlog of critical habitat designations and provide a timeline and a detailed breakdown of how this estimate was derived. If Congress were willing to fund the cleanup of this backlog, would there be any remaining obstacle?

Response. Section 4 of the ESA requires critical habitat be designated for every species listed as threatened or endangered. Currently only 306 species or 25 percent of the 1,211 listed in the United States under the jurisdiction of the Service have designated critical habitat. Additionally, there are currently 257 candidate species for which listing proposals are believed to be warranted but which are precluded by higher priority actions. If these species are ultimately listed, critical habitat would need to be designated for most of them as well. Based on actual costs to complete recent critical habitat designations (between $200,000—$600,000 per designation including economic analysis, NEPA compliance, and drafting and publication costs), it would cost hundreds of millions of dollars to designate critical habitat for all of these species as the Act requires. It would also take many years and substantial resources to completely address the backlog of critical habitat designations. Even if the resource issues related to the critical habitat backlog are addressed, the real issue is whether or not statutory critical habitats are effective in helping to conserve listed species. In 30 years of implementing the ESA, the Service has found that the designation of statutory critical habitat provides little additional protection to most listed species, while consuming significant amounts of conservation resources. We believe that the service's resources and time could be better spent focusing on those actions that benefit species through improving the consultation process, the development and implementation of recovery plans, and voluntary partnerships with States and other landowners. The present system for designating critical habitat is broken, and we are prepared to work with Congress to identify ways of providing necessary legislative relief.

Question 6. Please provide a list of any contractors that have been retained by the Administration to perform economic impact analyses under ESA δ4(b)(2), the terms of those contractual arrangements, and copies of any instructions that have been provided to these contractors regarding how economic impact analyses should be performed.

Response. The Service contracts with Industrial Economics (IEC) in Cambridge, Massachusetts, for completion of its economic analyses. In turn, IEC subcontracts out some of the analyses to other firms. Copies of the contracts and instructions are attached.

Question 7. How much money would the Administration save if it were not to follow the Tenth Circuit's New Mexico Cattle Growers ruling and to instead estimate only the impacts of critical habitat designation that are not redundant with the impacts of other ESA provisions? Please provide a timeline and a detailed breakdown of how this estimate was derived.

Response. We made a policy decision to apply the 10th Circuit ruling nationwide because we believe it to be an accurate statement of the law. It has since been endorsed by courts in other circuits, including the 9th Circuit and here in the District

of Columbia, and has not been rejected in any other circuit. Accordingly, it is not at all clear that we could legally pursue the course of action raised in this question.

In addition, it is difficult to estimate precisely how much the Service might save by this approach. Much of the Service's increased economic analysis costs result from doing a more robust analysis of the actual costs of critical habitat designations. Because we would still take the time to do these more robust analyses, we would likely still incur those associated costs.

Question 8. When the Administration characterizes the critical habitat protection as essentially valueless, does it take into account the value that critical habitat designation plays in protecting habitats not occupied by the listed species? If so, what other ESA provision protects unoccupied habitats? What impact on listed species would result from removing critical habitat protections for unoccupied habitats? Approximately how many listed species will need to be restored to unoccupied habitat in order to recover?

Response. The last element of the question highlights what we believe to be the most important aspect of the unoccupied habitat issue—that its value under the ESA is for reintroduction of the species in order to assist in recovery. However, a critical habitat designation cannot compel a private landowner, or a State or Federal agency, to allow reintroduction on their land, or to manage their land to benefit the species. This can only result from the voluntary cooperation of the landowner or land manager.

As noted in my answer to Question 1 above, it is our experience that many landowners—public and private—oppose critical habitat designations. Inasmuch as most listed species are found, in whole or part, on State and private lands, critical habitat designations have become significant obstacles to obtaining landowner cooperation in species conservation, and a critical habitat designation for unoccupied habitat thus often harms rather than assists recovery for the species for which it is designated.

STATEMENT OF JEFFREY KIGHTLINGER, GENERAL COUNSEL, METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

INTRODUCTION

Chairman Crapo and members of the subcommittee, thank you for the opportunity to testify before you today on the subject of critical habitat and the Endangered Species Act (ESA). My name is Jeffrey Kightlinger, and I am the General Counsel of the Metropolitan Water District of Southern California. I am testifying today on behalf of the Western Urban Water Coalition (WUWC).

The WUWC consists of the largest urban water utilities in the West, serving over 30 million western water consumers in 16 metropolitan areas in seven States, including major urban areas in California. The WUWC represents the following urban water utilities: Arizona city of Phoenix, city of Tucson; California East Bay Municipal Utility District, Metropolitan Water District of Southern California, San Diego County Water Authority, City and County of San Francisco Public Utility Commission, Santa Clara Valley Water District; Colorado Denver Water Department; Nevada Las Vegas Valley Water District, Southern Nevada Water Authority, Truckee Meadows Water Authority; Utah Central Utah Water Conservancy District; and Washington city of Seattle. WUWC members own and operate water management, water supply and hydroelectric projects, including dams, water conduits, reservoirs, and other facilities involved in water supply, transfer, and power generation services. In operating these projects, WUWC members are involved in a number of Federal and non–Federal activities that are subject to the ESA.

Since its inception in 1992, the WUWC has been very active in ESA legislation, administrative reform and implementation. We have participated actively in numerous congressional efforts to reauthorize the ESA, as well as proposals for specific legislation. For example, we testified on, and in support of, S. 1180, the Kempthorne/Chafee reauthorization bill. We also participated in a legislative effort including environmental organizations, resource development organizations, and the Western Governors' Association, to develop a consensus ESA reauthorization bill. In addition to these congressional activities, the WUWC has played a major role in Clinton and Bush Administration efforts to make the ESA work more effectively, including administrative reform efforts such as the No Surprises Policy, guidance on habitat conservation plans (HCPs), candidate conservation agreements, safe harbor agreements, and similar efforts. Many WUWC members participate in HCPs and other species conservation efforts. The WUWC's general approach to the ESA has been to support its goals, seek to improve its implementation, and provide for

proactive conservation efforts in a manner that is consistent with the goal of insuring a reliable, long-term supply of high quality drinking water for over 30 million customers in western cities.

WUWC members are directly affected by agency actions that arise under the subject of today's hearing: the designation of critical habitat and its regulatory consequences. The purpose of my testimony is not to complain about critical habitat or its implementation. Instead, the WUWC offers recommendations for constructive reform that will allow critical habitat to play a more effective and meaningful role in achieving the goals of the ESA, without resulting in inefficient and unduly expensive agency action or unnecessary restrictions on water supply activities.

My testimony begins with a summary of the WUWC's experience with critical habitat, including a description of some current issues. In this discussion, I will identify general problem areas that need be addressed by Congress and the executive branch. Next, my testimony summarizes several aspects of critical habitat that the WUWC has addressed through recently released position papers. These issues include how to define the term "adverse modification of critical habitat" under section 7 of the Act and how to conduct an analysis of the economic impacts of critical habitat designation under section 4. In the final section, I set forth the WUWC's specific recommendations.

WUWC EXPERIENCE WITH CRITICAL HABITAT

These are several examples of how critical habitat designation is of concern to WUWC members.

One category of regulatory effects caused by designation results from imposing a geographically defined area for application of section 7. Under section 7, a time-consuming consultation process occurs and all actions that would adversely modify or destroy critical habitat are prohibited. Such designation applies section 7 to actions merely because they fall within the scope of the designation, rather than because they necessarily affect members of the listed species. This is an issue of particular concern when the Services adopt the kind of broad geographic approach for designating habitat relied upon in recent years.

In several instances, federally authorized actions have been stopped because they would modify designated critical habitat, even where the species is not present and would not be jeopardized. In Idaho Rivers United v. National Marine Fisheries Serv., No. C94–1576R 1995 WL 877502 (W.D. Wash. 1995), a no jeopardy biological opinion was invalidated because, although listed fish were absent from an affected stream due to severe mine pollution, the stream was designated as critical habitat and fish might someday use unoccupied critical habitat after mine cleanup.

Most recently, a court enjoined the U.S. Army Corps of Engineers from implementing maintenance dredging for an existing, federally authorized navigation channel on the Snake River. National Wildlife Fed'n v. National Marine Fisheries Serv., 235 F. Supp.2d 1143 (W.D. Wash. 2002). In its analysis of likelihood of success on the merits, the court found it likely that the National Marine Fisheries Service's (NMFS) biological opinion for the project would be found invalid because it concluded that designated critical habitat for Snake River chinook salmon would not be adversely modified. The court criticized NMFS for concluding that the seasonal dredging would have no adverse effect because it would occur when listed migratory fish were not present in the navigation channel. The court reasoned that "the absence of a species from its critical habitat should not provide a basis for the determination that adverse modification is permissible." The court's reasoning indicates that once critical habitat is designated, it is protected in its own right without regard for the presence or absence of the listed species.

These are of concern to WUWC members because of the very broad areas that have been designated in western States. For example, critical habitat designations by the U.S. Fish & Wildlife Service (FWS) have included 513,650 acres in Los Angeles, Orange, Riverside, San Bernardino and San Diego counties, California, for the coastal California gnatcatcher,[1] 6.4 million acres in California, Nevada, Arizona, and Utah for the desert tortoise,[2] 1,980 river miles in Colorado, Utah, New Mexico, Arizona, Nevada, and California for four endangered fishes in the Colorado River,[3]3 and 599 miles of streams and rivers in southern California, Arizona, and New Mex-

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[1]Final Determination of Critical Habitat for the Coastal California Gnatcatcher, 65 Fed. Reg. 63,679 (October 24, 2000).

[2]Determination of Critical Habitat for the Mojave Population of the Desert Tortoise, 59 Fed. Reg. 5,820 (February 8, 1994).

[3]Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback Sucker, Colorado Squawfish, Humpback Chub, and Bonytail Chub, 59 Fed. Reg. 13,374 (March 21, 1994).

ico formerly designated as critical habitat for the southwest willow flycatcher.[4] Currently pending proposals for critical habitat designations include over 1.6 million acres in California for vernal pool species (4 shrimp and 11 plants),[5] 1.2 million acres in Pima and Pinal counties, Arizona, for the cactus ferruginous pygmy—owl,[6] and 57,446 acres along 657 miles of rivers and streams in Colorado and Wyoming for the Preble's meadow jumping mouse.[7]

The NMFS has taken the same sweeping approach to critical habitat designations. In 2000, NMFS designated critical habitat for 19 evolutionarily significant units (ESUs) of salmon and steelhead to include water bodies, beds, banks, and riparian areas in over 150 watersheds, river segments, bays, and estuaries covering huge sections of the States of California, Idaho, Oregon, and Washington.[8] NMFS designated "all river reaches accessible to listed salmon or steelhead within the range" of the fish.[9] "Accessible reaches" were defined as "those within the historical range of the [fish] ESUs that can still be occupied by any life stage of salmon or steelhead."[10]

Second, depending upon how the term "adverse modification" under section 7(a)(2) is defined, the water supply operations of WUWC members could be subjected to a higher standard of protection than would be the case in the absence of such a designation. As a result of the decision in the Gulf Sturgeon case, Sierra Club v. U.S. Fish & Wildlife Service, 245 F.3d 434 (5th Cir. 2001), adverse modification of critical habitat is arguably held to a "recovery" standard. While the precise regulatory meaning of the term "adverse modification" is yet to be defined, it is generally assumed than achieving "recovery," as required under the Gulf Sturgeon case, requires a greater degree of protection than simply avoiding jeopardy to the continued existence of the species in the wild.

This possibly heightened level of protection would be a matter of concern to numerous WUWC members. For example, WUWC members whose activities affect salmon and steelhead listed under the ESA are affected by NMFS's recovery-driven "Habitat Approach" to ESA consultation. The Habitat Approach is set forth in a detailed guidance document that NMFS applies to all consultations affecting salmon and steelhead. Habitat Approach: Implementation of Section 7 of the Endangered Species Act for Actions Affecting the Habitat of Pacific Anadromous Salmonids (1999). Under the Habitat Approach, NMFS equates the requirements of section 7 consultation with "recovery":

Impeding a species' progress toward recovery exposes it to additional risk, and so reduces its likelihood of survival. Therefore, in order for an action to not "appreciably reduce" the likelihood of survival, it must not prevent or appreciably delay recovery. Id. at 3.

A third area of concern results from the relationship between sections 7 and 9 of the ESA. As noted above, the designation of critical habitat has direct regulatory and economic consequences through consultation on Federal actions under section 7 of the ESA. However, those effects are also reinforced through the "take" prohibition in section 9 of the ESA.

Under section 9, it is unlawful to "take" a listed species through actions that kill, injure, harass, or harm a species. Unlawful "harm" to a species includes habitat modification when it leads to actual death or injury. At least one court has suggested that unlawful take or harm may include modification of designated critical habitat when a listed species is not present. Defenders of Wildlife v. Bernal, 204 F.3d 920, 930 (9th Cir. 1999) (B. Fletcher, concurring) (explaining that finding of no take was based on evidence that modified habitat was unoccupied, but reserving

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[4]Determination of Critical Habitat for the Southwest Willow Flycatcher, 62 Fed. Reg. 39129 (July 22, 1997) (designation invalidated and remanded by New Mexico Cattle Growers Ass'n v. U.S. Fish & Wildlife Serv., 248 F.3d 1277 (10th Cir. 2001).

[5]Proposed designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants, 67 Fed. Reg. 59884 (Sept. 24, 2002).

[6]Designation of Critical Habitat for the Arizona Distinct Population Segment of the Cactus Ferruginous Pygmy-owl, Proposed Rule, 67 Fed. Reg. 71,031 (November 27, 2002). The original final designation, since vacated by National Assoc. of Home Builders v. Norton, No. Civ.–00–903–PHX–SRB, (Sept. 21, 2001), encompassed 731,712 acres in Pima, Cochise, Pinal, and Maricopa counties, Arizona. Designation of Critical Habitat for the Cactus Ferruginous Pygmy-owl, 64 Fed. Reg. 37,419 (July 12, 1999).

[7]Designation of Critical Habitat for the Preble's Meadow Jumping Mouse, Proposed Rule, 67 Fed. Reg. 47, 153 (July 17, 2002).

[8]Determination of Critical Habitat for 19 ESUs of Salmon and Steelhead, 65 Fed. Reg. 7764 (Feb. 16, 2000). This designation was subsequently withdrawn and remanded pursuant to a consent decree approved by the court in National Ass'n of Home Builders v. Evans, No. 1 o'clock–CV–02799 (CKK) (D.D.C. April 30, 2002).

[9]50 C.F.R. §226.212.

[10]Id.

question whether modification of designated critical habitat would be unlawful take).

Any resource manager who seeks to utilize an area designated as critical habitat therefore is confronted with the heightened risk that unintended, incidental take could occur or be alleged in connection with any use of resources in a designated critical habitat area. Prudent resource managers may respond to such a risk by avoiding any use of the critical habitat area or, if that is not a feasible option, the resource manager may seek incidental take protection through a voluntary HCP and incidental take permit under section 10 of the ESA. When a resource manager applies for an incidental take permit, Federal action is required and consultation under section 7 of the ESA is required. Thus, the direct regulatory relevance of critical habitat designation is applied through ESA section 7 and reinforced by the increased threat of take liability under ESA section 9.

One specific illustration of this problem is presented by the city of Phoenix water supply program and the designation of critical habitat for the southwest willow flycatcher. The city of Phoenix owns a water right to approximately 68,000 acre feet of storage space in the Horseshoe Reservoir on Arizona's Verde River. The City developed the storage space by adding spillway gates on Horseshoe Dam in the early 1950's that expanded the Reservoir's storage capacity by adding approximately 26 feet to the full pool elevation of the reservoir. During wet years, the Reservoir has been filled to full pool, but a 6-year drought has prevented the City from storing water in the upper elevations of the reservoir in recent years.

During the drought, riparian vegetation including willows and tamarisk have grown in thickets along the riverbank where it flows through the area that would normally be inundated by a full reservoir. Recent biological surveys suggest that the endangered southwest willow flycatcher may be using this emerging habitat, and the U.S. Fish & Wildlife Service is now studying this new information as it prepares to propose the designation of critical habitat for the flycatcher. Should the Service designate as critical habitat those emerging habitat areas within the Horseshoe Reservoir pool, the city of Phoenix could be severely impacted by the potential loss of effective reservoir capacity that enables the City to generate and use an average of 21,000 acre feet of water per year.

Although the City owns exclusive water rights within the Horseshoe Reservoir, the Dam and Reservoir are managed and operated solely by the Salt River Project (SRP). The operation of the Horseshoe Reservoir by SRP is a non–Federal action and, as such, does not require consultation under section 7. However, the designation of critical habitat within the Reservoir could increase the risk of take allegations under section 9, should the Reservoir be filled and the emerging flycatcher habitat flooded.

Significantly, the flycatcher is a migratory bird and is not present in the Verde River valley during most of the fall, winter, and spring months. Under normal hydrological conditions, the Reservoir would be filled during the winter and spring (during which time emergent flycatcher habitat could be flooded in whole or in part), but the water level would be drawn down by May, drying most emergent flycatcher habitat before flycatchers return to the Verde River valley. In this way, the city of Phoenix could exercise its water rights and fully utilize its storage capacity without directly killing or injuring flycatchers or their nests when the birds are present. Unfortunately, the volume of water that is drawn down in preparation for the return of the birds may exceed the ability of the city of Phoenix to put that water to beneficial use during that timeframe and some of the water could be lost. Should the emerging habitat be designated as critical, the city of Phoenix and SRP could face an increased risk of allegations that any damage to emerging habitat from inundation within the Reservoir harms the flycatcher species even when the birds are not present, and is therefore a take under the ESA.

The City and SRP are accountable to the public for stable, long-term management of water resources that are vital to the communities of central Arizona. The City is required under State law to use renewable water supplies, such as water from the Verde River to meet its demand. As such, it is impracticable for the city of Phoenix to avoid using the valuable and vital water rights it has developed in the Verde River. At the same time, under the circumstances, the City and SRP are likely to apply for an incidental take permit that will promote reliable use of water resources with assurances of ESA compliance.

This "ricochet effect" of critical habitat designation can be expected in many instances where there is no apparent Federal action, but heightened efforts to manage risk under section 9's take prohibition lead to Federal action and consultation on critical habitat effects.

All of these examples point to the need for reform of the manner in which critical habitat is designated and the regulatory significance that it carries once established.

CRITICAL HABITAT REFORM ISSUES

In answer to the question "Is the critical habitat system as we know it broken?" this committee has itself consistently answered that in the affirmative. For a period extending over 5 years, this committee, by vote and by recommendation to the full Senate, has recognized that the critical habitat system used in administering the ESA is either intrinsically flawed in its legislative enabling statute or extrinsically flawed in its application, or both. Many meritorious proposals for reform have been made, both administratively and legislatively, in recent years. Unfortunately, none of these has taken hold. The WUWC hopes that, through the efforts of this committee, the House Resources Committee, and the Departments of Commerce and the Interior, these problems can now be addressed through proactive efforts that benefit both species and the regulated community.

There are some fundamental realities associated with critical habitat. These are:

1) It makes little sense to invest the limited resources of agency staff on the numerous lawsuits focusing on critical habitat, when their efforts could be better applied to habitat improvement and recovery.

2) Courts are not the right place to prioritize agency actions and budgets affecting all endangered species.

3) FWS and NMFS (the Services) do not have an effective means to address the problems posed by the critical habitat deadlines and requirements imposed by the Act. These deadlines are driving an overwhelming docket of lawsuits, and that litigation is paralyzing the overall ESA program.

4) The Services do not have adequate resources to discharge their duties under the ESA generally or the Act's critical habitat requirements in particular. As the WUWC has testified previously, an effort should be made to provide the Services with the resources necessary to carry out their duties under the Act.

5) The requirement that the Services designate critical habitat concurrent with the listing process is a mandate that dictates less than fully informed decisions. The requirement prevents the use of the best available science to explore the real needs of the species, it also results in decisions that tend to over-designate critical habitat and cause unnecessary regulatory burdens.

6) Critical habitat can, and does, have an economic impact as a result of the additional restrictions that are imposed. These impacts can be measured and should be taken into account in balancing costs versus benefits at the time of designation. Such an analysis is necessary to weigh the benefits of including versus excluding an area as critical habitat.

7) When properly applied, the prohibition on adverse modification of critical habitat can be an important conservation tool. However, when it is too broad in application, the net of effect is to cause over-regulation and opposition to species conservation efforts.

The WUWC believes that each of these problem areas can be solved. While comprehensive legislative reform of the overall ESA remains desirable, focused congressional initiatives or actions by the Administration also can go a long way toward improving the critical habitat program.

The WUWC is a pragmatically driven coalition that seeks a balance between the extremes. We act as a policy resource to committees and the Administration, to provide alternatives that can improve the ESA's day-to-day administration for species, as well as for delivering water to our broad constituencies. To this end, we have explored the question of how to improve critical habitat designation and implementation. Our specific proposals for achieving such reform are discussed below.

CRITICAL HABITAT REFORM PROPOSALS

The WUWC's critical habitat recommendations fall in three categories: 1) timing of designation; 2) analysis of economic impacts at the time of designation; and 3) definition of the term "adverse modification" under the prohibition of section 7(a)(2). Each recommendation is addressed separately.

1. Designate Critical Habitat After a Species is Listed, Coordinated With Recovery Plan Preparation

As currently drafted, the ESA requires that critical habitat be designated at the time of listing. In reality, these designations are seldom made coincident with listing. This practice has resulted in a spate of lawsuits to force designation. These lawsuits are often successful, resulting in a massive backlog of court-enforced designations. The Services lack the resources to carry out this responsibility effectively. As a result, designations are hurried, and often imprecise and overly broad. In addition, as a practical matter, there generally is not enough information available at the time of listing to define critical habitat accurately. Such information is more gen-

erally available when recovery plans are prepared. The WUWC believes that designation should not be required at the time of listing, but instead should be deferred to be coincident with recovery plan development. Congress needs to relax this restriction to relieve the litigation burden and make possible more common sense, and scientifically justified designation decisions.

2. Require Accurate Assessment of the Economic Impacts of Critical Habitat

The courts have made it clear that the Services must accord meaningful consideration to the economic impacts of critical habitat designation. To do so, the WUWC recommends that a formalized approach to conduct such analyses be developed by the government. The WUWC has developed recommended guidance for this purpose. Our position paper on how to conduct such an economic analysis is attached to my testimony. See Exhibit 1. Our proposal is based on the following principles.

a. Not All Habitat Is Equally Important to Species Conservation: Delineate and prioritize habitat based on biological qualities that contribute to species conservation

A useful and meaningful comparison of the benefits and costs of critical habitat designation must begin with recognition that some areas of habitat are more valuable for species conservation than other areas. Biologists within the Services should use their professional judgment to delineate and prioritize habitat segments based on the quality of habitat attributes present within a habitat segment and the degree to which the habitat segment is essential to the conservation of a species. The process of delineating and prioritizing habitat segments satisfies the ESA's requirement that critical habitat be based on "specific geographic areas" that contain physical and biological features that are essential for the conservation of the species and require special management. 16 U.S.C. §1532(5)(A).[11]

By delineating and prioritizing habitat, biologists provide economists with a means for quantifying the benefits of habitat designation that can then be compared to the costs or economic impacts. Without delineation and prioritization of habitat based on biological qualities, all habitat must be treated as though it is of equal biological value and significance. When all habitat is equal, economic costs are the only consideration in the exclusion process. Areas where critical habitat protection costs are high will be more likely to be excluded from designation and areas where critical habitat protection costs are low will be more likely to be designated regardless of the biological qualities that may exist in the included and excluded areas. The prospect of including or excluding areas from designation based solely on economic costs should give biologists the courage to delineate and prioritize habitat based on its value for species conservation.

b. Avoid Expensive Efforts to Monetize Biological Benefits: Attempting to monetize the biological benefits of designation and species recovery adds little value for policymaking

While it is important to delineate and prioritize habitat areas based on biological qualities, there is little value in attempting to monetize the biological value of habitat areas for purposes of comparing costs and benefits of designation. With the passage of the ESA, the United States has implicitly assumed that the benefits of saving a species from extinction exceed the economic costs of species recovery for the Nation as a whole. The economic analysis called for in the ESA should find the least cost combination of 1) critical habitat areas, and 2) associated management measures that will provide for the recovery of the species.

Placing a monetary value on the recovery of a species or the contribution that a particular habitat area makes to recovery requires nonmarket valuation studies. The methodology and results for such studies are widely debated within the economics profession, and frequently lead to more confusion and debate than clarity in decisionmaking. Monetizing the biological benefits of designation and recovery is not necessary for the policy decisions that need to be made, but it adds significant administrative costs that should be avoided.

c. Operationalize Special Management for Critical Habitat: Specify what "special management" is necessary if habitat areas are designated as critical

Delineation and prioritization of habitat areas helps economists to identify the benefits of designation, but economists also need information on habitat protection

[11]"Prior to designation, there must be a determination of the constituent elements of air, land, and water areas essential to the species. These constituent elements are defined as including physical structures and topography, biota, climate, human activity, and the quality and chemical content of the land, water, and air, with a focus on the physical and biological needs of the species." 50 C.F.R. §424:12.

measures that will impose costs. Economists need to know what special management measures or protections are likely to be imposed on each habitat segment if it is designated as critical.

For instance, critical habitat designation will often mean restrictions on current or future uses of land and water, or requirements for increased water levels at certain times of the year. Specificity is required for economists to assess economic activity with and without critical habitat designation. Merely designating land areas leaves economists' imagining what restrictions may be biologically implied and generates concern and uncertainty among stakeholders.

An attempt should be made to describe these special management measures and protections in a manner that is distinct from the requirements that would be imposed to prevent jeopardy to the survival of a species if it is present in the habitat area. For example, a set of fundamental "jeopardy" prescriptions might be necessary to ensure survival of the species by protecting individual animals from destruction or to mitigate the rate of habitat destruction. By comparison, an additional set of critical habitat prescriptions might be added to preserve existing high quality habitat or to restore degraded habitat to an improved condition.

A comparison of special management measures to prevent jeopardy or protect critical habitat for a given species could be accomplished by developing alternatives in a manner similar to the development of action alternatives for purposes of the National Environmental Policy Act. At a minimum, prescriptions for a no action or jeopardy alternative could be compared with special management prescriptions for designated critical habitat. Additional sets of critical habitat prescriptions could be formulated as alternatives where a proposed designation is of broad biological, economic, and social consequence. Examples of economic analysis based on comparisons of species and habitat protection alternatives already exist.[12] Studies such as these may serve as models for the development of specific management alternatives that will help economists to differentiate between the economic costs of ESA protection under the jeopardy and critical habitat standards.

d. Use A Pragmatic Approach: Economic analysis must be practical and meaningful to policymaking

In designating critical habitat, the Secretary must "weigh the benefits of exclusions against those of inclusion of particular areas within the designated habitat." Catron County Board of Comm'rs v. U.S. Fish and Wildlife Serv., 75 F.3d 1429 (10th Cir. 1996). The benefits of exclusion are avoided costs to resource owners and users. Economic analysis of critical habitat designation can be viewed as a type of project analysis where the critical habitat designation is a non-construction project (a decision). Many of the decisions will be about restrictions on current or future resource use, which can be considered permanent, but not irreversible.

The required analysis is not so much benefit-cost analysis, but that special class of benefit-cost analysis known as cost-effectiveness analysis. Here the objective or "numerator" is not expressed in monetary terms, but in biological terms such as those habitat conditions essential for the conservation of the species. A cost-effectiveness analysis may be performed by (1) developing alternative configurations of habitat designations that provide equivalent biological benefits and selecting the least cost alternative or (2) by assigning habitat segments ordinal biological and cost values and including or excluding areas based on their marginal contributions to total costs and benefits.

Under the first cost-effectiveness approach, each of the options to be analyzed may be defined as a combination of habitat areas that provides equivalent biological benefits, so that economists may perform a least-cost analysis to select a habitat configuration that imposes the least cost by excluding areas where higher costs may be avoided.

Under the second cost-effectiveness approach, each habitat area may be analyzed in a 2 x 2 matrix that assigns ordinal values for high and low economic cost and high and low biological value. Areas with high costs and low biological values will be good candidates for exclusion. Areas with low economic costs and high biological values will be good candidates for designation. Indeed, there may be some areas so important to a species that they should be designated regardless of the economic impacts. Areas that are low cost and low value may be excluded or included by the Services with less potential for public controversy. Areas that are high cost and high biological value can be intensely debated by the public for inclusion or exclusion.

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[12]See, e.g., Northwest Power Planning Council, "Human Effects Analysis of the Multi–Species Framework Alternatives" (2000); Huppert et al., "Economic Effects of Management Measures Within the Range of Potential Critical Habitat for Snake River Endangered and Threatened Salmon Species" (1992).

Using a simple matrix and decisionmaking process such as this will promote meaningful public participation and it will focus decisionmakers and the interested public on the most important factors in a complicated process. It will also approximate the least-cost analysis method that assumes species conservation as a given objective and minimizes the costs of obtaining that objective.

Because cost-effectiveness analysis involves comparisons between options, ordinal rankings between options are more important than absolute, cardinal measurements of dollar costs. The cost of doing the economic analysis of critical habitat is a very real administrative burden to both agency and stakeholders. Procedural short-cuts, or approximations, where done in an even and unbiased manner according to professionally accepted methods, should still describe the level and distribution of economic impacts with sufficient accuracy, and should not adversely affect decisions about which options to include. It is also important that the intricacy of the analysis and the use of original data be scaled to the size and complexity of the critical habitat being considered. For example, a more complete analysis is justified for a migratory fish or bird covering large areas than for a rare plant known to occupy only a few hundred acres. Consistent with FWS analyses in the early 1990's, large-scale designations may justify a more rigorous model and data set for measuring economic impacts, but not all designations will require such extensive analyses.[13]

e. Decision Makers Should Know "Whose Ox Is Gored": Local impacts matter for a full social accounting of who is impacted

Analysis of economic impacts from critical habitat designation should make the incidence of economic costs explicit for decisionmakers. In Middle Rio Grande Conservancy Dist. v. Babbitt, 2000 U.S. Dist. LEXIS 21438 *59-*76 (D.N.M., Nov. 21, 2000), the court was critical of an economic analysis of critical habitat designation for the silvery minnow because it concluded that economic impacts were insignificant from a long-term national perspective. The court found the conclusion to be callous and insensitive to the very real near-term economic costs to region designated as critical habitat. The Services' approach to future analysis of critical habitat impacts should avoid a repeat of the highly theoretical conclusion that all economic impacts are insignificant over the long-term and broad-scale.

In the early science of cost-benefit analysis, there was little attention given to who received benefits or incurred costs. In the U.S. Flood Control Act of 1936, Congress declared that "benefits to whomsoever they shall accrue" of Federal projects shall exceed costs. Agencies like the Corps of Engineers, Bureau of Reclamation, and Soil Conservation Service (now Natural Resources Conservation Service) used different analytical approaches, so attempts were made to standardize project analysis. As project analysis evolved, more attention was given to the incidence of costs and benefits.

A series of Federal publications on project analysis culminated in the "Principles and Standards for Water and Related Land Resource Planning," published in the Federal Register, at 38 Fed. Reg. 174, by the Water Resources Council in 1973. The Principles and Standards lay out four accounts to display benefits and costs among different plans: 1) national economic development, 2) environmental quality, 3) regional development, and 4) social well-being. The regional development account should not be ignored in critical habitat studies.

The decision rule for Federal project analysis has generally been "Potential Pareto Superiority." That is to say, a new economic condition is judged superior to the existing condition if, by changing the condition, the gainers could compensate all losers and still remain better off. Note that this definition turns on potential, not actual, compensation of the losers of the new policy. Objective economics is silent on whether the compensation should actually be paid because either choice requires a normative judgment.

Accounting for distributional impacts helps to inform decisionmakers such as the Services who are asked to make a somewhat normative judgment whether the costs of critical habitat designation outweigh benefits for a given area of habitat. "In fact, a welfare analysis that does not adequately indicate individual group effects may be misleading or useless to government officials endowed with authority to make interpersonal comparisons." (HJS, Applied Welfare Economics and Public Policy, p. 46). Furthermore, other Federal laws such as the Regulatory Flexibility Act, 5 U.S.C. §§601–612, require the Services to consider the economic impacts of their regulations on small entities such as individuals, small businesses, and local government. An analysis of distributional impacts of critical habitat costs is essential for fulfilling this requirement.

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[13]See, e.g., U.S. Fish & Wildlife Service, The Economic Analysis of Critical Habitat Designation Effects for the Northern Spotted Owl (1992).

As stated in Principle 3 above, Potential Pareto Superiority was assumed in the ESA when Congress determined that the national benefits of conserving a given species exceeds all costs. Therefore, the national economic development (NED) account for species conservation can be assumed to be positive. The function of economic analysis of critical habitat designation under the ESA therefore is to inform decisionmakers of the relative costs and benefits in the region where habitat designation will occur. Delineating the regional or local winners and losers is essential to informed comparisons between critical habitat options, and to informing decisions by the Services in the critical habitat economic impact exclusion process.

3. Define "Destruction or Adverse Modification of Critical Habitat"

Critical habitat derives its regulatory significance, in a large degree, from the prohibition in section 7(a)(2) on the adverse modification of such habitat. Section 7(a)(2) also prohibits actions that cause "jeopardy" to listed species. The Services' definitions for the two consultation tests, "jeopardy" and "destruction or adverse modification," are quite similar. Because the Services have tended to treat the jeopardy and critical habitat tests as equivalent regulatory standards, the agencies have failed to designate critical habitat for most listed species. Federal courts have held that the Services must designate critical habitat because it provides distinct protection for listed species apart from the jeopardy test that becomes effective with the listing of a species. See Gulf Sturgeon, supra; Natural Resources Defense Council v. U.S. Dept. of the Interior, 113 F.3d 1121 (9th Cir. 1997).

Because Federal courts now have held that the jeopardy and critical habitat standards for consultation under the ESA are distinct tests, the Services must resolve the meaning of that distinction as a fundamental condition for determining the economic impact of critical habitat designations. Environmental advocates have pressed for a distinction based on whether critical habitat effects will impair or promote recovery of a species. Indeed, the ESA defines "critical habitat" as "specific geographic areas" that are "essential to the conservation of the species" and it defines "conservation" as "use of all methods and procedures" which are necessary to bring the status of a listed species to the point where protection afforded by the ESA is no longer necessary. 16 U.S.C. §1532(3),(5)(A). Many equate conservation with delisting of a species or recovery.

In the Gulf Sturgeon decision, the Fifth Circuit appears to have held that critical habitat protection is a "recovery" standard that is distinct from the jeopardy standard. Gulf Sturgeon invalidated the Services' regulatory definition of "destruction or adverse modification" of critical habitat because it was tied to the survival of a species and not just species recovery. 245 F.3d at 443. In that case, the court invalidated the definition of adverse modification which equated that term with jeopardy.

As a result, the Services must now promulgate a new definition of the term. The WUWC believes that adverse modification should be defined to accomplish several key objectives. These are:

1. As required by the court decision, to link the term to recovery.

2. The adverse impacts should be tied to the condition of the specific biological and physical habitat elements that were identified in, and the basis for, designation of critical habitat in the first instance. As required by section 7(a)(2), the determination whether those elements have been appreciably diminished is to be based upon the "best scientific and commercial data available" at the time of the specific consultation. Thus, although the most current data should be used, the measure for recovery is to be based on the reasons for the designation in the first instance. Such an evaluation should make allowances for new information shedding light on recovery needs.

3. The concept of "net effects" should be reflected, so that adverse impacts can be offset by protective measures and replacement habitat associated with the proposed action. This concept is already reflected in reasonable and prudent alternatives in biological opinions, and it should be incorporated into the determination of whether adverse modification would occur.

4. In addition to these changes to the definition, the Service's Section 7 Handbook should be revised to assist in explaining how adverse modification will be determined. In particular, the Handbook revision should emphasize the importance of avoiding too narrow an analysis of the relationship between the impacts of the proposed action and recovery. Assessing recovery solely in the context of impacts of the activity in the action area could lead to a result of finding adverse modification even though those effects are inconsequential when viewed from the perspective of the overall designated area. This is especially likely to be the case when large areas are designated. In such a circumstance, even an impact that affects a significant amount of habitat in the action area still may not appreciably diminish the overall

recovery prospects for the species. This principle should be explained in the Section 7 Handbook.

Two related critical habitat reforms should be considered. First, the Services should ask for public input on the question of whether the regulatory definition of the term "jeopardy" also should be revised. The Gulf Sturgeon case raises the question of the proper relationship between jeopardy and adverse modification. If adverse modification is to be linked to recovery, the logically related inquiry is how the recovery and survival concepts should be dealt with in determining jeopardy. This is an issue that should be presented for public comment as part of the adverse modification rulemaking.

Second, perhaps the most important issue associated with critical habitat that is in need of reform, is the manner in which designations are made. The Services need to develop an approach to designation that does not merely result in all possible habitat being determined to be "critical." Part of this reform calls for the development of a meaningful and realistic approach to analyzing the economic consequences of designation. In addition, the biological criteria applied to identify areas that are essential to the conservation of the species need to be revised so that only those areas important for recovery will be designated. Administrative reform to achieve more precise and carefully delineated critical habitat designations should be coupled with revision to the regulatory definitions.

Based upon these concepts, the revised definition of critical habitat would read as follows:

Destruction or adverse modification means the net effect of a direct or indirect alteration that appreciably diminishes the value of the physical or biological features of the designated area such that they no longer meet the needs considered to be essential to the conservation of the species at the time of designation, after consideration of offsetting improvements in habitat or protection for replacement habitat associated with the proposed action.

RECOMMENDED ACTION

To implement the recommendations and principles described above, Congress and the Services should take several actions.

First, the ESA needs to be amended to eliminate the requirement that critical habitat should be designated at the time of listing. Instead, the deadline should be made more discretionary and generally associated with the development of recovery plans.

Second, the regulatory definition of adverse modification needs to be revised as described above in this testimony.

Third, the Services should develop a detailed framework and methodology for economic analyses of critical habitat designation through a process of public notice in the Federal Register with review and comment. The framework and methodology may be embodied in amendments to the Services' joint regulations on critical habitat designation, 50 C.F.R. Part 424, or in a formal guidance document similar to the Services' Habitat Conservation Planning and Consultation Handbooks, or using a combination of rule amendments and guidance. The framework and methodology for economic analysis of critical habitat designation should satisfy fundamental standards based on the principles set forth in this paper:

l Stop using the "incremental" or "baseline" approach for economic analysis and require that each critical habitat designation include an exclusion process based on a professional and meaningful economic analysis of the relative economic costs for designation of specific geographic areas as critical habitat.

l For a given species and proposed habitat designation, require the Services to delineate and prioritize habitat segments based on their relative value in conserving a listed species.

l For the exclusion process, use a least-cost or cost-effectiveness approach that assumes the objective of species conservation as a given that need not be monetized, and searches for a critical habitat configuration that satisfies the conservation objective while minimizing costs. Use pragmatic decisionmaking short-cuts such as ordinal ranking of habitat segments and the costs of critical habitat protection for a particular habitat segment.

l For a given species and proposed habitat designation, require the Services to distinguish between a set of resource prescriptions that would likely be required to avoid jeopardy and a set of additional resource prescriptions necessary to conserve the species. This will enable the Services' economists to assign different economic costs to the inclusion or exclusion of a specific geographic area from critical habitat designation.

l Calculate the costs of designation using accepted professional economic methods and data that are scaled to the scope of a proposed designation and its biological, social, and economic impact. For designations involving a highly localized species, a simple tally of impacted activities and expected economic costs may be conducted using available secondary data or informal survey methods such as telephone interviews with affected agencies and property owners. However, more sophisticated data sets and models such as input-output or computed generalized equilibrium should be used to calculate economic costs for large-scale designations and expected large scale economic impacts that are directly and indirectly caused by designation.

l In all economic analyses of critical habitat designation, use an accounting stance that recognizes localized and regional impacts in the near term so that decision-makers are provided with information on the welfare effects of designation and are not misled by a limited consideration of national accounts over the long term.

CONCLUSION

The WUWC believes that critical habitat can be made an effective part of the overall ESA program. To do so, focused reform initiatives are necessary to: cause the timing of such designations to occur when the best data are available; standardize an approach to meaningful economic analysis; and redefine the meaning of adverse modification. This approach will result in more efficient, cost-effective, and appropriate protection for critical habitat, without generating such an overwhelming workload for the Services that the ESA program slows to a halt or causes unnecessary restrictions on the nonFederal sector. The WUWC looks forward to working with Congress and the Bush Administration to achieve these goals.

WESTERN URBAN WATER COALITION "FOR THE FUTURE OF THE WEST"

POSITION PAPER

ADMINISTRATIVE REFORM OF ENDANGERED SPECIES ACT

GENERAL PRINCIPLES FOR ANALYSIS OF THE ECONOMIC IMPACTS OF CRITICAL HABITAT DESIGNATION

Introduction

The Endangered Species Act ("ESA") requires the U.S. Fish & Wildlife Service ("FWS") and the National Marine Fisheries Service ("NMFS") (collectively the "Services") to consider economic impacts when they designate critical habitat. Any area may be excluded from critical habitat if the benefits of exclusion outweigh the benefits of specifying such area as part of the critical habitat, provided deleting the area will not result in extinction of the species. The courts have recently invalidated the use of the "incremental" or "baseline" approach (which attributes all economic impacts to the jeopardy test of the listing decision, and few or no economic impacts to critical habitat designation) in the analysis of the economic impacts of critical habitat designation. This position paper recommends several general principles for an alternative approach to the analysis of economic impacts associated with critical habitat designation.

Discussion

Principle 1: Not All Habitat Is Equally Important to Species Conservation—Delineate and rank habitat based on whether it contains biological attributes that are essential to species conservation.

A meaningful comparison of the impacts of critical habitat designation must begin with recognition that some areas of habitat are more valuable for species conservation than others. The starting point for meaningful economic analysis therefore is an objective ranking of habitat based on biological value. The degree to which an area or attribute of habitat is already protected by the ESA or other applicable law is also an important consideration. There is little or no added biological benefit that can be obtained by designating geographic areas and habitat attributes that have already been designated as critical habitat for other species, or where habitat conservation plans already achieve the objective of conserving a species within a specific geographic area.

Principle 2: Define Special Management or Critical Habitat—Specify what "special management" is necessary if habitat areas are designated as critical.

Economists also need information on management and protection measures that will impose costs. Examples of economic analyses based on comparisons of species and habitat protection alternatives already exist. Studies such as these may serve

as models for the development of specific management alternatives that will help economists to differentiate between the economic costs of ESA protection under the jeopardy and critical habitat standards.

Principle 3: Use A Pragmatic Approach—Economic analysis must be practical and meaningful to policymaking.

In designating critical habitat, the Services must "weigh the benefits of exclusions against those of inclusion of particular areas within the designated habitat." The required analysis is cost-effectiveness, which compares benefits and costs in terms of a "bang for the buck," and is expressed as the ratio of benefit gained per dollar expended. In this case, the benefit or "numerator" is not expressed in monetary terms, but in biological terms such as those habitat conditions essential for the conservation of the species. The cost or "denominator" is expressed in dollar terms based on regulatory costs imposed for each habitat segment that is designated. A cost-effectiveness analysis can be performed by either (1) selecting the least-cost configuration of alternative habitat designations that provide equivalent biological benefits, or (2) assigning habitat segments ordinal biological and cost values and analyzing their marginal contributions to total costs and benefits. Under the second approach, areas with high costs and low biological values are candidates for exclusion, and areas with low economic costs and high values are candidates for designation. Areas with low cost and low value may be excluded or included with less potential for public controversy, while areas with high cost and high value can be debated further. This approach could be further refined with medium-cost and medium-biological value factors. In this type of comparison, ordinal rankings between options are more important than absolute, cardinal measurements of dollar costs, but biologists must first prioritize habitat segments and economists must calculate the costs of designation for each habitat segment. The costs should be calculated with sufficient accuracy and scope, relative to the size and complexity of the critical habitat being considered, to describe the direct, indirect, and cumulative costs of including each habitat segment. Consistent with FWS analyses in the early 1990's, large-scale designations may justify a more rigorous model and data set for measuring economic costs and other economic impacts, but not all designations will require such extensive analyses.

Principle 4: Decision Makers Should Know "Whose Ox Is Gored"—Regional, local, and near-term impacts matter for a full social accounting of who is impacted.

Local and regional economic impacts and near-term impacts must be explicitly considered in the analysis of economic costs caused by critical habitat designation. From a national perspective, the decision rule for Federal project analysis has generally been a determination of net national benefit. However, with enactment of the ESA, the Federal Government has implicitly assumed that the benefits of saving a species from extinction exceed the costs for the Nation as a whole. The economic analysis of critical habitat designation should identify who will be impacted in the region where habitat designation will occur, evaluate the degree of their potential loss, and serve as a tool for minimizing the quantity of loss while achieving the ESA's objective of species conservation. An analysis that uses a national accounting stance should be rejected in most cases because it diminishes the impact of what might be major dislocations in local markets, especially in rural areas.

Principle 5: Avoid Efforts to Monetize Biological Benefits—Attempting to monetize the biological benefits of designation and species recovery adds little value for policymaking.

There is little value in attempting to monetize the biological value of habitat areas, as monetary values cannot be assigned to biological benefits without non-market valuation studies, which in nearly all cases are poorly suited for estimating the benefits of habitat protection with any precision. Prioritizing habitat segments mirrors the information that might be obtained through a monetized approach. Given the substantial expense of non-market studies, the additional information that might be gained from such studies would almost always be of little value for the policy decisions that need to be made in the designation critical habitat.

Recommendations

The Services should develop a detailed framework and methodology for economic analyses of critical habitat designation through public notice and comment, including face-to-face discussions with affected interest groups. The new approach may be embodied in the Services' joint regulations on critical habitat designation, 50 C.F.R. Part 424, or in a formal guidance document. Specifically, the framework and methodology should: 1) eliminate the "incremental" or "baseline" approach and include an exclusion process based on meaningful economic analysis; 2) delineate and prioritize habitat segments based on their relative value in conserving a listed spe-

cies; 3) use a least-cost or an ordinal ranking cost-effectiveness approach that avoids the monetization of biological benefits, and searches for a critical habitat configuration that satisfies the conservation objective while minimizing costs; 4) require the Services to distinguish between measures necessary to avoid jeopardy and those necessary to conserve the species; 5) calculate the costs of designation using methods and data that are scaled to the scope and impacts of a proposed; 6) use an accounting stance that recognizes localized and regional impacts in the near-term, and that considers direct, indirect and cumulative economic impacts.

WESTERN URBAN WATER COALITION "FOR THE FUTURE OF THE WEST"

POSITION PAPER

ADMINISTRATIVE REFORM OF ENDANGERED SPECIES ACT

PROPOSED AMENDMENTS TO THE ESA REGULATORY DEFINITION OF ADVERSE MODIFICATION

Introduction

As a result of the decisions in Sierra Club v. U.S. Fish and Wildlife Service, 245 F.3d 434 (5th Cir. 2001) ("Gulf Sturgeon"), the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) are considering revisions to the regulatory definition of the term "destruction or adverse modification" of critical habitat. This briefing paper suggests a proposed approach for this new definition.

Discussion

Under section 7(a)(2) of the Endangered Species Act (ESA), Federal actions are prohibited if they result in "destruction or a verse modification" of critical habitat. In the Gulf Sturgeon case, the Fifth Circuit determined that the definition of this term had to be equated with an action that appreciably diminishes the "conservation" or recovery of the species. In reaching this conclusion, the Court distinguished the definition of "adverse modification" from the regulatory definition of the term "jeopardy", which also is prohibited by section 7(a)(2) of the ESA. The FWS/NMFS regulations had defined "jeopardy" and "adverse modification" to mean essentially the same thing: an activity that diminishes appreciably the likelihood of both the survival and recovery of a listed species." After Gulf Sturgeon, it is clear that these two terms must be subject to different definitions.

Adverse modification should be defined to accomplish several key objectives. These are:

1. As required by the court decision, to link the term to recovery but not survival.
2. The adverse impacts should be tied to the condition of the specific biological and physical habitat elements that were identified in, and the basis for, designation of critical habitat in the first instance. As required by section 7(a)(2), the determination whether those elements have been appreciably diminished is to be based upon the "best scientific and commercial data available" at the time of the specific consultation. Thus, although the most current data should be used, the measure for recovery is to be based on the seasons for the designation in the first instance.
3. The concept of "net effects" should be reflected, so that adverse impacts can be offset by protective measures and replacement habitat associated with the proposed action. This concept is already reflected in reasonable and prudent alternatives in biological opinions, and it should be incorporated into the determination of whether adverse modification would occur.
4. In addition to these changes to the definition, the Service's Section 7 Handbook should be revised to assist in explaining how adverse modification will be determined. In particular, the Handbook revision should emphasize the importance of avoiding too narrow an analysis of the relationship between the impacts of the proposed action and recovery. Assessing recovery solely in the context of impacts of the activity in the action area could lead to a result of finding adverse modification even though those effects are inconsequential when viewed from the perspective of the overall designated area. This is especially likely to be the case when large areas are designated. In such a circumstance, even an impact that affects a significant amount of habitat prospects for the species. This principle should be explained in the Section 7 Handbook.

Two related critical habitat reforms should be considered. First, the Services should ask for public input on the question of whether the regulatory definition of the term "jeopardy" also should be revised. The Gulf Sturgeon case raises the question of the proper relationship between jeopardy and adverse modification. If ad-

verse modification is to be linked to recovery, the logically related inquiry is how the recovery and survival concepts should be dealt with in determining jeopardy. This is an issue that should be presented for public comment as part of the adverse modification rulemaking.

Second, perhaps the most important issue associated with critical habitat that is in need of reform, is the manner in which designations are made. The Services need to develop an approach to designation that does not merely result in all possible habitat being determined to be "critical." Part of this reform calls for the development of a meaningful and realistic approach to analyzing the economic consequences of designation. When the costs of including a particular area in a designation outweigh the added biological benefits, the corresponding area need not be designated. In addition, the biological criteria applied to identify areas that are essential to the conservation of the species need to be revised so that only those areas truly important for recovery will be designated. Administrative reform to achieve more precise and carefully delineated critical habitat designations should be coupled with revision to the regulatory definitions.

Based upon these concepts, the revised definition of critical habitat would read as follows:

Destruction or adverse modification means the net effect of a direct or indirect alteration that appreciably diminishes the value of the physical or biological features of the designated area such that they no longer meet the needs considered to be essential to the conservation of the species at the time of designation, after consideration of offsetting improvements in habitat or protection for replacement habitat associated with the proposed action.

Recommendation

The Services should amend the regulatory definition of "adverse modification" to clearly distinguish the term from "jeopardy." The definition should relate to the factors that were the basis for the listing decision and take into account "net effects" by accounting for offsetting measures that improve habitat conditions.

Responses of Jeffrey Kightlinger to Additional Questions from Senator Crapo

Question 1. You stated in your testimony that Courts are not the best place to prioritize agency actions and budgets affecting all endangered species. Yet we have seen courts respond to litigation with just those remedies. Why shouldn't courts retain jurisdiction over a species critical habitat designation when the Service does not complete a designation on time according to the statute?

Response. Courts must retain jurisdiction over a species' critical habitat designation when the Service does not complete a designation according to the requirements of the statute, regulations and guidelines. Once litigation has been commenced to determine if the Service has complied with the law, and the court finds that there is misfeasance by the Service, it is incumbent on the court to oversee completion of the designation according to law. Thus, in many cases, the courts have no choice but to retain jurisdiction. Our point is that the law should not be written in a way that requires the courts to play such a role. Allow me to expand on my statement concerning the prioritization of critical habitat designation in the whole.

We have been told by successive Administrations that the critical habitat process is broken and in need of attention. Why? One need only look at the recent litigation history to realize how skewed the system has become.

Each Administration tries to interpret the ESA according to its own environmental political philosophy. During the last Administration, the Service relied upon an interpretation designed to avoid addressing the economic impacts of a critical habitat designation. That Administration effectively eliminated a very costly economic analysis process by creating the legal fiction that there were no impacts at the critical habitat designation stage. Rather, they said, all economic impacts flowed from the species listing phase, which does not require a statutory economic analysis.

The courts have rejected this approach, and in fairness, the previous Administration was coming to grips with this new reality when the Administrations changed. As a result of the courts' rejection of the fiction used to avoid the costs of economic analysis, there was a flood of litigation from those who sought to limit the extensive designations of the previous administration. This followed the previous flood of litigation under which environmental organizations sought to compel designations due to the failure to determine critical habitat of the listing phase, as the law requires. As a result, the inflexible language of the statute has caused a torrent of litigation to force designations due to missed deadlines and then a host of additional lawsuits

to invalidate the designations as a result of the failure to account for economic impacts.

Driven by disparate agendas, party plaintiffs crowd the courts seeking to be heard. They have inevitably been able to find some misfeasance in the process applied by the Service. This is because the Act is too inflexible. The law incorrectly assumes that sufficient, recent, competently conducted scientific evidence exists for each threatened or endangered species and that a historically underfunded Service can competently process, interpret and apply that data in a satisfactory way at the time of listing.

A court with retained jurisdiction following a finding of a violation of ESA by the Service will set timeframes, review findings and shepherd a critical habitat designation using the court's powers. As a result, the Service is required to re-direct scarce dollars to address critical habitat for species picked by plaintiffs, rather than being able to plan for designations based upon factors that would lead to an improved process considering the need of all similarly situated species.

Agency ability to plan, knowing the needs of all threatened or endangered species that compose the universe of species needs for the Service, is severely compromised. Similarly, with the loss of planning goes the ability to complete a critical habitat designation without impacting economic and property values, the ability of natural resource users to get financing for annual operations, or conservation planning by affected parties. Changing the statutory language is the solution. More flexibility and discretion is required as to the time of such designations. Meaningful economic analysis should be required, and the Service needs to have the obligation to balance those economic costs against the biological benefits. If something does not give on the current requirements of the Act for critical habitat designation, the ESA program very well might collapse over the long run because of the heavy litigation burden. Congress can address this problem through the changes recommended in the Western Urban Water Coalition's testimony before this subcommittee.

Question 2. You stated in your testimony that this committee had for 5 years held that the critical habitat system was broken. You also stated that moving critical habitat designation to the recovery planning stage was the single most important legislative initiative in solving this problem. For those new members of the committee could you restate your reasoning and update us on any emerging problems with that legislative solution.

Response. The Senate Environment and Public Works Committee has been responsible for productive effort and debate over the Endangered Species Act. With the introduction and positive recommendation to the floor of the Chafee-Kempthorne Endangered Species Act Reauthorization bill in 1997, this committee went on record supporting concepts that have remained the focal point of reform efforts. Codification of "no surprises" and Section 10 remedies, peer review standards for "good science," reliance on empirical evidence over modeling theory, reinforcement of the recovery planning process, and shifting the responsibility for the "may effect" standard to the action agencies were all elements of that bill.

Recognizing that a committee of Congress is reorganized each cycle, it is understood that no Congress is bound by the understanding of the previous Congress. Nevertheless, we can draw from previous committee action for a guide to our deliberations today.

The concept of delaying designation of critical habitat until the recovery planning process was likewise first introduced in the Chafee-Kempthorne bill. The reasoning was simple, sound and logical. The process for listing a species as threatened or endangered is grounded in a scientific process. Once it is determined that a species meets the criteria of the Act and should be listed, a series of time lines are imposed for that action. One of these requirements is for the contemporaneous designation of "prudent and determinable" critical habitat. Unfortunately, the listing stage is just the beginning of the scientific study into the habits, needs and processes at work that led the species to the brink of extinction and how to recover it.

The development of a recovery plan is the stage where the needs of the species are better understood and more information is available. It is the document that defines the habitat needs of the species and other factors that may or may not amount to jeopardy under the act. This is when we know the most about a species because the recovery plan is the vehicle designed to contemplate just these factors. Delaying critical habitat designation to the recovery stage is the logical conclusion to the scientific problem of having sufficient empirical data to make decisions about the future of the species.

Question 3. In your testimony you refer to a "cost-effectiveness" framework for economic analysis of critical habitat. Could you explain how the "cost-effectiveness" framework would operate.

Response. The Endangered Species Act Requires That Economic Costs Be Considered In Critical Habitat Designation And Allows For The Exclusion Of Habitat Where The Economic Costs Outweigh The Biological Benefits.

The Endangered Species Act ("ESA") requires that economic impacts be considered in the designation of critical habitat. 16 U.S.C. § 1533(b)(2); 50 C.F.R. § 424.12(a). The Supreme Court has held that the requirement that economic impacts be considered in the critical habitat designation process is one "of obligation rather than discretion." Bennett v. Spear, 520 U.S. 154, 172 (1997). Any area may be excluded from critical habitat if the benefits of exclusion outweigh the benefits of specifying such area as part of the critical habitat, provided deleting the area will not result in extinction of the species. 16 U.S.C. § 1533(b)(2); 50 C.F.R. § 424.19. The process of weighing the benefits and costs of designation is known as "the exclusion process."

THERE ARE TWO WAYS TO WEIGH THE BIOLOGICAL BENEFITS AND ECONOMIC COSTS IN THE CRITICAL HABITAT EXCLUSION PROCESS.

Cost-Benefit Analysis

A cost-benefit analysis is a comprehensive approach that requires quantification of economic values for both the costs and the benefits of a proposal. The estimated costs and benefits are changes in the value of market goods and non-market recreational, esthetic, and cultural values attributable to a proposal. Cost-benefit analysis is commonly summarized in the form of a benefit-cost ratio, with a ratio of greater than one signaling the economic feasibility of the project. In other words, cost-benefit analysis is a used to determine whether or not to take some action because the benefits outweigh the costs.

Successful application of cost-benefit analysis requires a high degree of confidence in scientific and economic understanding of a proposal and its consequences. For critical habitat designation, cost-benefit analysis requires not only a high degree of confidence in the biological requirements for species conservation, but an understanding of how those requirements translate into economic benefits and costs. Biologists are reasonably capable of determining the habitat needs of a species and economists are fairly able to estimate the economic costs of protecting habitat. But translating the biological benefits of habitat protection into economic benefits is far more difficult, and ultimately unnecessary for the exclusion process.

Cost Effectiveness Analysis

Unlike cost-benefit analysis, a cost-effectiveness approach does not ask whether to undertake a proposal. Rather, it asks how to implement an accepted objective in the most cost-effective or efficient manner. This allows the decisionmaker to compare factors that are unalike such as biological benefits and economic costs without taking the additional step of translating noneconomic biological benefits into dollar values comparable to economic costs.

When a specific objective is predetermined, alternative project designs may be considered using cost-effectiveness analysis. In the critical habitat context, cost-effectiveness analysis identifies the least cost method for providing enough habitat for the conservation of a species, where the objective is specified in non-monetary, biological terms. Cost-effectiveness analysis can identify the lowest cost combination of protected habitat that satisfies the objective of species conservation. If there are alternative habitat configurations that will conserve a listed species, the decision is simple—choose the least costly alternative.

AN EXCLUSION PROCESS BASED ON COST-EFFECTIVENESS IS BETTER SUITED TO THE PURPOSES OF THE ESA.

A cost-effectiveness approach is best suited to the exclusion process in critical habitat designation because it accepts the objective of species conservation as a given requirement of the ESA, and it searches for the combination of habitat protection that satisfies the objective while minimizing the adverse economic impacts of habitat protection.

- The feasibility perspective of cost-benefit analysis is inappropriate because it is best suited to a decision whether to designate critical habitat rather than a decision on how best to designate critical habitat. The issue whether to designate critical habitat is irrelevant because the ESA requires designation for the conservation of a species.
- A cost-effectiveness approach to critical habitat designation accepts the ESA requirement that sufficient habitat be designated for the conservation of a species and uses the exclusion process to achieve a more efficient designation that obtains species conservation at the least cost.

• A cost-effectiveness approach allows decisionmakers to effectively compare two factors that are not measured in the same units: biological benefits and economic costs. Biologists provide the decisionmaker with an array of eligible habitat units that are scored and/or ranked according to the strength of each unit's contribution of physical and biological elements within that are essential to the conservation of a species. Economists then evaluate the economic costs of conserving those physical and biological elements of each habitat unit and provide the decisionmaker with an estimated cost for designation of each unit. The decisionmaker then assembles a critical habitat designation that protects the best habitat at the least cost. This can be done, for example, by first including areas of high habitat value and low economic cost. Then, excluding areas of low habitat value and high economic cost. Then, if more habitat is needed for the conservation of the species, a decisionmaker may include areas of high habitat value and moderate to high economic cost, or areas of low to moderate habitat value, but low cost. Such a cost effectiveness strategy will support the more obvious cases of inclusion or exclusion and focus deliberations and public comment on the close calls where a decisionmaker must exercise judgment to ensure the conservation of the species by providing the right quantity, kind, and configuration of habitat without imposing unnecessary or undue costs.

• A cost-effectiveness analysis is more pragmatic and it plays to the strengths of both the biologists and the economists. A cost-effectiveness approach forces biologists to make explicit judgments based on the obvious proposition that some areas of habitat are more valuable and essential for species conservation than others. It requires that biologists use their strengths to differentiate between the habitat quality of different areas so that there is a greater likelihood that the best habitat will receive protection. When all habitat is treated as equal, the only variable that controls is cost, regardless of the underlying truth that some habitat units have more biological importance than other units.

• A cost-effectiveness approach also plays to the strength of economic science by allowing economists to make economic estimates rather than biological judgments. It does so by avoiding the problem of placing dollar values on biological benefits. A cost-benefit analysis requires decisionmakers to convert biological benefits into economic values to allow for a direct comparison—a highly speculative, controversial, costly, and ultimately unnecessary endeavor. This frequently places economists in the position of interpreting biological values. It also leads to misplaced measurements, estimates, and arguments over economic benefits that are incidental to critical habitat designation but do not serve the purpose of species conservation. For example, protection of critical habitat may be assigned a high economic value based on human recreation or aesthetic interests, but the ESA does not call for critical habitat protection for any reason other than the conservation of a listed species. Cost-effectiveness maintains a focus on the biological benefits of habitat for the ESA-mandated purpose of species conservation.

STATEMENT OF JOHN F. KOSTYACK, SENIOR COUNSEL, NATIONAL WILDLIFE FEDERATION

Good morning, Chairman Crapo and members of the subcommittee. My name is John Kostyack, and I am here to speak on behalf of the National Wildlife Federation, the nation's largest member-supported conservation education and advocacy organization.

I greatly appreciate the opportunity to testify today regarding critical habitat protections under the Endangered Species Act (ESA). I have been working on ESA issues for nearly 10 years, serving as a litigating attorney, a policy analyst and commentator, and most recently, as manager of NWF's Species Conservation program. Based on this experience, I have developed an ever-increasing recognition of the importance of critical habitat. At the same time, I have come to recognize that significant changes are needed in how the two Federal wildlife agencies designate and protect critical habitat. My testimony explains why critical habitat is important and suggests measures that could be taken to make it work better.

THE IMPORTANCE OF CRITICAL HABITAT

The ESA reaches its 30th anniversary this year, and there is much to celebrate. Hundreds of species that were once heading toward extinction are now either recovering or at least stabilized. Across the country, people recognize the ESA as a vitally important law for protecting the nation's precious biological heritage.

Yet many of the species on the ESA's list of threatened and endangered species are not yet on the path to recovery. Scientists tell us that the chief reason why so many of our animal and plant species are declining toward extinction is habitat loss,

fragmentation and degradation. We need to do a better job protecting, managing and restoring habitats. We cannot hope to save endangered species until we come to grips with the continual, piecemeal loss of their habitats, even after their listing under the ESA. It hardly matters what else we do for an endangered species if we fail to protect its habitat. Congress itself recognized this essential point when it enacted the ESA in 1973, stating at the outset its that its purpose was to conserve "the ecosystems upon which endangered species and threatened species depend."

Congress and the Administration should now focus on improving implementation of each of the ESA provisions that conserve habitats. Looking first at the critical habitat provision, as this subcommittee is doing today, makes sense. For at least three reasons, the ESA's requirement to designate and protect a listed species' critical habitat is among the most important of the ESA's habitat protection provisions.

First, Section 4 of the ESA requires that, with few exceptions, critical habitat be designated for every species listed as either endangered or threatened. The ESA's implementing regulations require that when designating critical habitat, the U.S. Fish and Wildlife Service or National Marine Fisheries Service ("Services") must produce maps delineating all designated critical habitat. Drawing lines on a map gives clear guidance to the public about which lands and waters are particularly valuable to listed species. This helps educate people about the natural world they inhabit, and, more importantly, helps to ensure that key habitats are not destroyed out of sheer ignorance. As the U.S. Fish and Wildlife Service stated in connection with its designation of critical habitat for the northern spotted owl:

> "[C]ritical habitat serves to preserve options for a species' eventual recovery [It] helps focus conservation activities by identifying areas that contain essential habitat features (primary constituent elements) regardless of whether or not they are currently occupied by the listed species, *thus alerting the public to the importance of an area in the conservation of a listed species.*" 57 FR 1796 (emphasis added).

Second, Section 3 of the ESA defines critical habitat as encompassing all areas "essential for the conservation of the species," and defines conservation as those methods and procedures needed to achieve species recovery. Thus, the critical habitat provisions are designed to protect more than just the habitat occupied by the species in its depleted state; they ensure that all habitats needed for recovery are taken into account.

Third, once a species' critical habitat is established, Section 7 of the ESA prohibits Federal agencies from carrying out, funding or permitting any action that is likely to result in the "destruction or adverse modification" of critical habitat. Thus, Section 7 gives Federal agencies a clear mandate to protect the habitat essential for species recovery.

MAKING THE CRITICAL HABITAT PROVISIONS WORK BETTER

Seven steps by the Administration and/or Congress would make the ESA's critical habitat provisions work better for both people and wildlife.

Define Which Lands And Waters Are "Essential" to Conservation

Critical habitat designation is essentially a three-step process:

- First, the Services must define what habitat areas, whether occupied by the species or not, are "essential to the conservation of the species," and what habitat areas occupied by the species "may require special management considerations or protection." 16 U.S.C. §1532(5).
- Second, the Services must consider "the economic impact, and any other relevant impact, of specifying any particular area as critical habitat." 16 U.S.C. §1533(b)(2).
- Third, the Services "may exclude any area from critical habitat" if they determine "that the benefits of such exclusion outweigh the benefits of specifying such area," unless they find that a failure to designate a particular area "will result in the extinction of the species." Id.

Unfortunately, the Services often have excluded lands from critical habitat in the first step of this process despite the fact that the lands are "essential to the conservation of the species." This approach has undermined the vital role that critical habitat plays in species recovery. Only by defining which lands and waters are essential to conservation can the public be informed about which habitats are needed and empowered to begin devising measures for saving those habitats. Any exclusions from critical habitat should be handled in the third step of the designation process, not the first.

The Services have sometimes justified the exclusion of lands essential to the conservation of a species on the ground that they are protected by other regulatory mechanisms and thus may be receiving "special management considerations or pro-

tection" within the meaning of ESA §3(5). However, this justification reflects a fundamental misunderstanding of ESA §3(5) and the purpose of critical habitat. Under ESA §3(5), the fact that a particular area is protected through a habitat conservation plan or as a park argues for its status as critical habitat, not against. Although a listed species may already be receiving "special management considerations or protection" on certain parcels of land, it would receive important additional benefits from a critical habitat designation on those parcels. For example, such a designation educates land managers and others about the importance of maintaining and enforcing those management considerations or protections. It also provides a "safety net" of protection in the event those management considerations or protections are removed.

In Center for Biological Diversity v. Norton, 240 F. Supp. 2d 1090 (D. Ariz. 2003), a Federal court struck down the Services' interpretation of ESA §3(5)'s "special management considerations or protection" language. The court explained that this interpretation which limits the number of allowable protections to a listed species' habitat is not only "unsupported by the English language, but runs contrary to one of the enunciated policies of the ESA."

The Services should issue new regulations defining "special management consideration or protection." The new definition should recognize that the existence of special management considerations in an area does not operate as a basis for excluding habitat there from designation. To the contrary, it should lead the Services to presume that such an area is, in fact, critical habitat.

A consistent methodology for drawing critical habitat maps is also needed. No commonly accepted methodology has been developed to date. In some circumstances, the Services have taken short cuts such as drawing lines around entire regions, encircling both habitat areas and developed areas. The Service should solicit public and scientific input on alternative approaches to map drawing, with the ultimate goal of achieving a uniform methodology that is both cost-effective and scientifically rigorous.

Change the Timing of Designations

To ensure that designation of critical habitat is based on carefully developed science, Congress must change the deadlines for critical habitat designations. Under current law, which requires designation at the time of listing or at most 1 year thereafter, the Services have little time to gather the best scientific thinking on a species recovery needs. In this general time period, the Services are focused on the challenges of making the listing determination and on the threats contributing to species decline, not on what is needed to ensure species recovery. Initial designations should be postponed to coincide with development of the recovery plan, so that the recovery team's thinking helps to inform the decision on the scope of critical habitat. Similarly, the decision on critical habitat can help inform the recovery plan.

Because the ESA does not currently impose deadlines for completion of recovery plans, Congress should impose deadlines of 3 years from the date of listing for both critical habitat designations and recovery plans. This was the approach taken in S. 1100, a bill introduced in 1999 by the late Senator Chafee (R–RI), Senator Crapo (R–ID) and Senator Domenici (R–NM). The bill was approved by the Senate Environment and Public Works Committee and won the support of conservationists, industry groups and the Clinton Administration. It also established a reasonable and enforceable schedule for clearing up the critical habitat backlog. A similarly targeted approach to improving the critical habitat process would be welcome today.

Issue Guidance on Economic Impact Analysis

In New Mexico Cattle Growers Ass'n v. U.S. Fish & Wildlife Service, 248 F.3d 1277 (10th Cir. 2001), the court upheld an industry challenge to the ESA §4(b)(2) economic impact analysis of the southwest willow flycatcher's critical habitat. Without soliciting public comment, the Administration elected to adopt this controversial ruling as its national policy, rather than to fix the underlying problems that led to the lawsuit. As discussed below, this decision is wreaking serious havoc with the entire critical habitat program. New guidance on ESA §4(b)(2) economic impact analyses is needed to minimize the damage caused by the Administration's wrongheaded approach.

In New Mexico Cattle Growers, the industry plaintiffs targeted the U.S. Fish and Wildlife Service's economic analysis of the southwestern willow flycatcher's critical habitat designation, which concluded that there would be no costs associated with the designation. This no-cost conclusion was arrived at through use of the Services' baseline method, which called for analysis only of the impacts of the critical habitat designation, not of the impacts of other ESA protections (such as jeopardy and takings) that follow automatically from listing. Applying the baseline method, the

Service found that critical habitat designation alone has no costs. Underlying this finding was the Service's controversial view that critical habitat designations duplicate the protections provided by the ESA's jeopardy provision. However, the Tenth Circuit did not question this controversial view of critical habitat. Instead, it overturned the Service's baseline method, finding that "Congress intended that the FWS conduct a full analysis of all of the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable co-extensively to other causes."

Without soliciting public comment or waiting for the judgment of any other Circuit Court, and without revisiting its controversial assertions about the redundancy of critical habitat, the Bush Administration has quietly adopted the New Mexico Cattle Growers holding as Administration policy. This decision increases the risk to imperiled species in several ways. First, virtually all of the critical habitat designations across the country will now likely need to be redone, draining precious resources away from imperiled species awaiting listing, and delaying critical habitat protections for species that have never had a designation in the first place. Second, because the Administration has refused to keep critical habitat protections in place during the remand periods, habitat already designated as important for species recovery will lose vital protection for years while new economic analyses are performed. Third, because the Administration will now begin evaluating the economic impacts of listing, the difficulty of getting new species listed will increase. Meanwhile, the longstanding ESA principle that listing determinations be made based solely on science will be in jeopardy. Fourth, as Administration officials have suggested in comments to the media, the extensive re-write of critical habitat rules will ultimately lead to smaller areas covered by the critical habitat designations, as the Services begin to use the ESA §4(b)(2) exclusion authority in unprecedented ways.

To ensure that vital species protections are not lost, a rulemaking is needed on how to perform an ESA §4(b)(2) economic analysis. Whether to follow New Mexico Cattle Growers or whether to reinstate the baseline approach is an important policy question that should be answered only after a full public airing of alternatives. The Administration should begin this process by issuing an advanced notice of proposed rulemaking (ANPR) concerning procedural and substantive standards for implementing Section 4(b)(2). Although an ANPR is not required for such a rulemaking, it would allow the public to weigh in with the Administration before its views become locked in.

In an ANPR, and the proposed and final regulation that follows, the Administration should pay close attention to two issues.

First, any methodology must be cost-effective and time-sensitive, so that overall ESA implementation is not undermined by the costs and delays of the Section 4(b)(2) process. This is a strong argument for reinstating the baseline approach and not following New Mexico Cattle Growers. It is extremely wasteful to analyze the impacts of ESA protections other than critical habitat when the sole purpose of the ESA §4(b)(2) process is to decide the scope of critical habitat protection.

Second, any methodology must give a fair accounting to the ecological benefits of designating critical habitat and the costs of not protecting species and ecosystems. Too often, economic studies have failed to take into account the ecological limits of economic activity. Input from experts in the rapidly growing field of ecological economics should be solicited to ensure that a truly balanced methodology for economic analysis is developed.

Set Limits on Exclusions from Critical Habitat

In various ways, the current Administration has signaled that a major expansion of the ESA §4(b)(2) process for excluding lands from critical habitat is underway. A random sampling of recent critical habitat designations shows that this Administration has begun using ESA §4(b)(2) to exclude sizable parcels of land from critical habitat designations. In a New York Times article dated March 17, 2003, Assistant Interior Secretary Manson acknowledged that "we in this Administration have been looking at [this exclusion provision] quite a bit more robustly than has been done in the past." In testimony before this committee last week, Mr. Manson stated that entire Defense Department installations should be excluded from critical habitat designations simply upon a showing that a Sikes Act management plan has been completed. This pronouncement was made despite findings by the Defense Department's Inspector General that there is no documented evidence of implementation of those management plans.

What the Administration has not said about the ESA §4(b)(2) exclusion process is where are the limits. Lands and waters deemed by the Services to be "essential" for species conservation should not arbitrarily be denied protection. Policy guidance setting parameters for the ESA §4(b)(2) exclusion process is needed now, before a

host of critical habitat designations are finalized, to ensure that the letter and spirit of the ESA's critical habitat provisions are not undermined by ESA §4(b)(2) exclusions.

Revise "Adverse Modification" Regulation

Two years ago, the court in Sierra Club v. U.S. Fish and Wildlife Service, 245 F.3d 434 (5th Cir. 2001), held that critical habitat serves the goal of species recovery, and comes into play even when species survival is not immediately affected. For this reason, the court struck down the 1986 regulation defining "adverse modification" of critical habitat, which limited the application of critical habitat to actions affecting both recovery and survival.

To date, the Administration still has not responded to this court ruling. In fact, despite its extensive behind-the-scenes policymaking on species-specific critical habitat determinations, it has never enunciated and sought public comment on its overall approach to critical habitat. To date, its species-specific actions have moved in a direction opposite from what the court in Sierra Club suggested was necessary. Rather than using critical habitat in a manner that furthers species recovery, it has weakened critical habitat protections.

Regulatory action is needed now to redefine "adverse modification" of critical habitat consistent with the Fifth Circuit's decision in Sierra Club. If the Administration believes that critical habitat means something other than habitat essential to a species recovery, then it is obliged to state what that meaning is, and explain how the ESA would achieve its recovery goal in the absence of the critical habitat tool.

In addition to furthering the conservation of listed species, revising the "adverse modification" regulation would also help the Administration avoid wasting precious resources in ESA §4(b)(2) economic analyses. The New Mexico Cattle Growers ruling calling for expanded economic analyses stemmed from the Service's rationale that the "adverse modification" definition is redundant with jeopardy. If the Administration were to fix its "adverse modification" definition, then the Services would be free to return to the less costly baseline approach to ESA §4(b)(2) economic analyses without violating New Mexico Cattle Growers. The baseline approach would lead consistently to findings of both positive and negative impacts of critical habitat designation, and thus the basis for the prohibition against this approach in New Mexico Cattle Growers would disappear.

Educate the Public

In the March 17, 2003, New York Times article discussed above, developers argued that that any benefit of the proposed critical habitat designation for the endangered pygmy-owl in Arizona would be outweighed "by the economic costs of effectively barring development in 1.2 million acres, or two-thirds of the privately held, developable land in the area." This assertion, which was not rebutted elsewhere in the article or in any subsequent statements by the Administration, is not remotely connected with the truth. As discussed earlier, a critical habitat designation only affects actions carried out, permitted or funded by the Federal Government. In other words, most private land development is completely unaffected. Moreover, even where a Federal action is contemplated, the designation of critical habitat does not mean that the action is terminated. It simply means that a consultation must take place with one of the Services to ensure that the action does not cause adverse modification of the critical habitat.

Unfortunately, the kind of alarmism about critical habitat voiced in the New York Times article is frequently employed by individuals seeking to undermine public support for the ESA, with the ultimate goal of evading their own responsibilities under the law. This is not surprising. What is disappointing, however, is the failure of the Services to clarify for the public what critical habitat does and does not do.

Critical habitat is a key provision in one of the nation's most important environmental laws. It is time for the agencies charged with implementing this provision to launch a public education campaign to explain the meaning and purpose of critical habitat and to build the necessary public support for its protection.

Provide Adequate Funding

The Services' budgets for ESA implementation has never been adequate. In fact, the chronic budget shortfalls for listing and critical habitat determinations have become worse in recent years as more species have joined the threatened and endangered lists and as the Services have embarked upon a massive reevaluation of their economic analyses.

To make the critical habitat program succeed, the Administration must request, and Congress must appropriate, the funds needed to remedy this growing budgetary gap. The nation's goal of recovering and delisting species can be achieved only if this essential habitat protection program is properly funded.

CONCLUSION

Thank you for the opportunity to testify today. I would happy to answer any questions that members of the committee may have.

STATEMENT OF DAVID L. SUNDING, PROFESSOR, UC BERKELEY

Mr. Chairman and members of the subcommittee, I appreciate the opportunity to speak with you today about the economic impacts of critical habitat designation. I am a professor of natural resource economics at UC Berkeley, and my areas of interest include wetlands and endangered species policy, housing and land markets, and water resources.

For the past 2 years, I have worked with colleagues and students at Berkeley to understand the effects of environmental permitting on the process of urban growth and development. As part of this larger research program, I have had the opportunity to consider the effects of critical habitat designation, in particular its impact on the timing and intensity of development; the availability of housing, roads and other needed infrastructure; and the costs of designation to consumers, developers, landowners and other groups.

Critical habitat designation has numerous economic impacts, including the following:

- Costs of completing a Section 7 consultation. Section 7 of the Endangered Species Act requires Federal agencies to consult with the U.S. Fish & Wildlife Service to insure that any activity funded, carried out or authorized will not likely jeopardize the continued existence of the species. This requirement increases the cost to complete the project, and also imposes additional costs on Federal agencies involved with the consultation. Sources of cost to the applicant include hiring outside consultants and attorneys to assist with the consultation process, and also the developer's own staff resources.

Another direct cost of Section 7 consultation is that the Service may require additional mitigation above that required by the action agency. In the case of California vernal pools, for example, the USFWS required that three acres of vernal pools be created for every one filled over and above the baseline. Adding the costs of the Section 7 consultation to the costs of mitigation, the direct, out-of-pocket cost of Section 7 consultation can be substantial, running to several thousand dollars per house in the case of some single-family housing projects.

- Costs of project modification. The Section 7 consultation process may also force project developers to redesign their project to avoid modification of certain areas deemed to be critical habitat. This project redesign typically reduces the output of the project. Again using the vernal pool case as an example, additional Section 7 conservation requirements consist of avoidance of 85.7 percent of vernal pools, a condition that allows only 14.3 percent of the project site to be developed. Project redesign imposes additional costs on developers and has other, potentially large, economic impacts that stem from the attendant reduction in output, particularly in areas like California that have a well-documented shortage of housing and urban infrastructure.
- Increase in price and reduction in the availability of housing and other development. Because critical habitat designation increases the cost of development and reduces the level of project output, it has the potential to alter regional markets for housing, commercial space and other types of development. In particular, critical habitat designation can increase market prices for these goods and result in large losses to consumers.

Whether for homes, schools, or other activities, there are numerous physical and regulatory constraints onsite selection. Accordingly, if critical habitat designation places some land off-limits to development, there are a limited number of comparable sites that can be developed to pick up the slack. While an area may appear to have an ample supply of developable land, in reality the development process is highly constrained. In such a setting, critical habitat designation can reduce the regional stock of housing and other goods, and prices of these goods will increase to establish new market equilibria.

- Delay in completion of projects. Critical habitat designation can also delay completion of projects. Unlike the supply reduction effects just described, delay is a pure loss affecting both producers and consumers. Theoretical results suggest that in many cases delay can be the largest component of overall economic impact resulting from environmental regulation.

Delay affects project developers by pushing out project receipts further into the future. Delay affects consumers in that they must postpone the enjoyment of the

project output. For example, if the project is to construct a school, then parents and children must wait to use the new facilities; if the project is to construct new homes, then homeowners must live temporarily in a less than optimal location, perhaps having to commute longer distances during this waiting period.

• Economic losses borne primarily by consumers. The economic impacts of critical habitat designation are borne mainly by consumers. Cost increases can be passed on to consumers to some degree, and increases in market price of project outputs actually benefit producers.

A stylized example can help to provide some sense of the magnitude of impacts and their distribution across the affected population. Consider a 1,000-unit housing project to be built on 200 acres (an average of 5 homes per acre, including roads, open spaces and other infrastructure). The pre-regulation price of the homes in the project is $250,000, and the elasticity of demand for these homes is 1.67. The pre-regulation marginal cost of homes in the project is assumed to be a constant $200,000.

Suppose that some of the project is considered to be critical habitat; development is to be avoided in these areas and any habitat impacts mitigated by some ratio of the USFWS' choosing. Suppose that the out-of-pocket cost to the developer of the Section 7 consultation, including the mitigation exaction, is $2,000 per home. Suppose also that critical habitat designation reduces the size of the project to a total of 900 units instead of the planned 1,000. Finally, suppose that critical habitat concerns delay completion of the project by 2 years.

Based on these figures, what are the economic impacts of critical habitat designation for this hypothetical project? Homes in the project are now more expensive to construct and there are fewer of them, so their market price will increase. Under the assumptions above, the price of a home in the project will increase from $250,000 to $265,000.

Consumers lose from critical habitat designation in three ways. Some are unable to purchase homes at all due to the reduction in the size of the project. Some do purchase homes, but at higher prices. And what consumption does occur is 2 years later than it would have been without the critical habitat designation. The impacts of permitting on developers (and landowners) are more complex. While producers gain from the increase in home prices, they lose from the increase in costs and from the delay in completing the project and receiving their return on investment.

Taking consumers and producers together, the total economic losses from critical habitat designation are $19.5 million for this project. This figure counts the cost of project delay, which amounts to $12.5 million, or over half of total losses. While permitting reduces the size of the project from 1,000 to 900 completed units (which results mainly in losses to consumers), both consumers and producers must wait an extra 2 years for these 900 units to be completed.

Several interesting conclusions emerge from this example:

• Critical habitat designation can be quite expensive. Total economic losses amount to nearly $20 million in the example, which implies costs of $1 million per acre of habitat conserved.

• Consumers bear the brunt of losses from critical habitat designation. They are unambiguously harmed by increases in price and reductions in the number of homes available for purchase. Developers and landowners fare better because they can pass on some costs to consumers and because they benefit from price increases.

• Traditional measures of the cost of regulation, namely the out-of-pocket cost of Section 7 consultation, are far off the mark. In this example, they understate true impacts by an order of magnitude.

• Regional and indirect impacts: Is conservation good for the environment? Critical habitat designation is effectively an ad hoc tax on development that changes its intensity, location and timing. As such, critical habitat designation can literally change the shape of urban areas, and another class of economic impacts results.

A natural question to ask is whether, by limiting growth in certain areas, critical habitat designation pushes development to areas more distant from the city center, away from jobs, shopping areas, schools and other amenities. If the effect of critical habitat designation is to force relocation to areas further out on the urban fringe, there can be some important regional and indirect consequences of designation as well. For example, if critical habitat designation forces commuters to locate further from their jobs, then designation may increase traffic congestion and commute times, and may contribute to regional problems of sprawl and air pollution.

• Impacts beyond the Federal nexus. A common claim of the USFWS is that critical habitat designation only causes economic impacts in the presence of a Federal nexus, that is if the activity in question is carried out with a Federal permit or Fed-

eral funding. While there is no definitive research on this topic, my work with developers, local government officials and others suggests that critical habitat designation has more far-reaching implications.

One concern is that development is subject to numerous regulatory processes carried out by Federal, State and local authorities. If land is designated as critical habitat by the USFWS, this designation may affect the way the project is treated by other agencies through a "signaling" effect. At a conceptual level, this signaling effect is not surprising. Regulators operate under uncertainty and are generally risk-averse. A decision by an expert environmental agency like the USFWS raises concerns about potential environmental impacts of the project and will lead other permitting agencies to take a more conservative approach to it. From a practical point of view, this signaling effect means that the costs of critical habitat designation go beyond the cost and the outcome of the Section 7 consultation process.

Another concern is that designation of critical habitat can impose costs on developers even if their project is not on critical habitat at all. The USFWS defines critical habitat in such a way that some time and expense is needed to determine whether a parcel is actually included or not. For example, critical habitat is defined in terms of landscape features and some investigation is required to determine their presence or absence on a particular parcel. Again, the practical effect is for the costs of critical habitat designation to extend beyond the Section 7 process.

RESPONSES OF DAVID SUNDING TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. What aspect of the Section 7 consultation process accounts for the largest share of costs resulting from critical habitat designation?

Response. Based on my study of housing projects in California that were affected by the presence of listed species, I have found that Section 7 consultation delays completion of projects by an average of over 6 months and that delay is typically the single most important cause of economic losses resulting from interagency consultation. I should note that to date, the Fish & Wildlife Service has not quantified any losses from delay in its calculation of economic impacts resulting from critical habitat designation.

Question 2. Does critical habitat designation have different impacts on public sector activities than on private sector projects?

Response. Local governments carry out a wide array of construction and maintenance projects for schools, libraries, parks, landfills, bridges and roads, stormwater management and other activities. These projects can be affected by critical habitat designation in much the same way as private sector projects.

The economic impacts of critical habitat designation resulting from public sector projects are somewhat different than impacts resulting from private projects. Public agencies typically have limited budgets, and if critical habitat designation increases the cost of carrying out some activity, less money is left for other projects. Thus, without an increase in funding critical habitat designation reduces the quality of public sector output and reduces its level. If taxpayers choose to increase funding to local governments to meet the costs of critical habitat designation, then this increase in taxation has its own cost.

Question 3. What groups bear the brunt of impacts from critical habitat designation?

Response. Drawing on evidence from the housing sector in California, consumers appear to be the group most affected by critical habitat designation. Developers have some ability to pass cost increases along to consumers in the form of higher prices. In most simulations I have conducted, consumers bear over 80 percent of all economic losses from critical habitat designation.

RESPONSES OF DAVID SUNDING TO ADDITIONAL QUESTIONS QUESTIONS FROM SENATOR INHOFE

Question 1. What aspect of the Section 7 consultation process accounts for the largest share of costs resulting from critical habitat designation?

Response. Based on my study of housing projects in California that were affected by the presence of listed species, I have found that Section 7 consultation delays completion of projects by an average of over 6 months and that delay is typically the single most important cause of economic losses resulting from interagency consultation. I should note that to date, the Fish & Wildlife Service has not quantified any losses from delay in its calculation of economic impacts resulting from critical habitat designation.

Question 2. Does critical habitat designation have different impacts on public sector activities than on private sector projects?

Response. Local governments carry out a wide array of construction and maintenance projects for schools, libraries, parks, landfills, stormwater management and other activities. These projects can be affected by critical habitat designation in much the same way as private sector projects.

The economic impacts of critical habitat designation resulting from public sector projects are somewhat different than impacts resulting from private projects. Public agencies typically have limited budgets, and if critical habitat designation increases the cost of carrying out some activity, less money is left for other projects. Thus, without an increase in funding critical habitat designation reduces the quality of public sector output and reduces its level. If taxpayers choose to increase funding to local governments to meet the costs of critical habitat designation, then this increase in taxation has its own cost.

Question 3. What groups bear the brunt of impacts from critical habitat designation?

Response. Drawing on evidence from the housing sector in California, consumers appear to be the group most affected by critical habitat designation. Developers have some ability to pass cost increases along to consumers in the form of higher prices. In most simulations I have conducted, consumers bear over 80 percent of all economic losses from critical habitat designation.

Question 4. How does your approach to measuring the economic costs of critical habitat designation compare to the one used by the Service?

Response. I find two major failings with the Service's approach. First, the Service emphasizes only the most obvious aspects of cost, namely the direct, out-of-pocket expenditures needed to complete the Section 7 process and ignores the potential for ESA regulation to change the market price of housing and other types of development. Accordingly, the Service ascribes all economic impacts to developers and landowners and none to consumers who will, in fact, ultimately bear most of the costs. Thus, the Service seriously underestimates the impacts of critical habitat designation (in some cases by more than an order of magnitude) and also mischaracterizes their incidence.

Second, the Service only attempts to measure the aggregate economic impacts of critical habitat designation. Congress intended that economic analysis be used to help prioritize land for inclusion in critical habitat. An analysis of the total cost of designation does not help determine which parcels should be included in critical habitat and which should be excluded. What is needed instead is a more detailed approach to economic analysis that recognizes differences in the opportunity cost of land.

STATEMENT OF CRAIG DOUGLAS, AUSTIN, TEXAS

Good morning Mr. Chairman and Members. My name is Craig Douglas, and I am a lawyer from Austin, Texas. I appreciate the opportunity to be here today with you, Judge Manson, and the other panelists to discuss critical habitat in a forum where we are all interested in finding solutions that work for the species and the people that live amongst them.

1. Introduction

Very briefly, a little bit about what I do and the people my firm represents so you will understand my perspective on this panel. My firm represents clients in several States relating to the environmental regulation of land use, and one of our areas of expertise is the Endangered Species Act. Our clients are engaged in a wide variety of endeavors, including: traditional land development; agriculture; public water and power agencies; local governments; large transportation projects; mining, and energy exploration and delivery. On the regulatory and compliance side, we represent these groups in connection with habitat conservation plan permits under section 10 of the Act, interagency consultations under section 7 of the Act, creating mitigation alternatives and solutions and working out conservation agreements. On the litigation side, we've worn several hats as well we've sued the Fish and Wildlife Service; we've been sued by environmental organizations, and in a new twist lately, we've even intervened in lawsuits on the side of the Fish and Wildlife service when they've been sued by interest groups on matters of concern to our clients. Presently, my firm represents a coalition of 17 agricultural and ranching associations and water supply agencies from four States that are challenging the designation of critical habitat for the Arkansas River shiner in Oklahoma, Texas, New Mexico, and Kansas. That case is currently pending in Federal District Court in New Mexico.

If there is a theme to our practice, it is that you can be an advocate for economic development and the protection of endangered species, and that you can be a strong advocate for conservation and property rights. That is what we try to bring to the table.

2. Support for ESA Reform

In the last few years, I've dealt with no other environmental issue that has spawned as much litigation as critical habitat under the ESA. I will not tread on the same ground that was ably covered by Judge Manson, but I must say this. To me, this is a very simple proposition: when you think about all of the things that we could be doing to protect and foster the recovery of endangered wildlife, and then you consider all of the time, energy, and money that we are spending down at the courthouse arguing over critical habitat, it is clear that the critical habitat component of the ESA is broken.

There are two things you can do here: Ether the law can be changed, or the regulatory focus can be refined within the confines of existing law. As for the former, we believe in the ESA, but we also believe that it needs reform, and critical habitat, in my view, is the best place to start. There was a proposal in the 106th Congress to change the role of critical habitat by shifting the focus from the regulatory component of the Act to the recovery planning component, and I believe that proposal merits further exploration. As I recall, the initiative to redefine the role of critical habitat under the ESA in this manner began under the Clinton Administration and was advanced by Secretary Babbitt, whose administration recognized that critical habitat was not resulting in any net value added to the recovery of endangered species. Under Secretary Norton, Judge Manson and Director Williams, we believe that the Fish and Wildlife Service is doing the best it can given the constraints imposed by the agency's manpower and resources, and the limited amount of flexibility afforded by the law. As Judge Manson testified earlier, they are actively engaged in trying to find solutions to this crisis, and I think that the regulated community is ready to work with them, and all interested parties, to help Congress with ESA reform.

Until reform is achieved, however, efforts to resolve this crisis are going to be limited by the parameters of current law. That is not to say that there are no options, some of which I am about to describe to you, but let me emphasize that ultimately, the cycle of litigation and the related drain on the Service's resources can only be remedied by statutory rather than regulatory reform.

3. Debate Sharpened by New Mexico Cattle Growers and Sierra Club

In 2001, the Courts of Appeals in the Fifth and Tenth circuits handed down the two decisions that are framing today's debate about the role of critical habitat and how it is to be designated and implemented under existing law. In the Sierra Club case out of the Fifth Circuit, the court ruled that the Service's regulatory interpretation of what it means to destroy or adversely modify critical habitat was inconsistent with the ESA insofar that it was linked to both the survival and recovery of a species. The court found that the statutory definition of critical habitat was grounded in the defined concept of conservation and recovery, which was much broader than mere survival. The Sierra Club case has been interpreted in some quarters to mean that critical habitat, as defined by the statute, is potentially a much more potent regulatory tool than it has been under the Service's interpretation of the law. Of course, we believe that the experience of the last several years has shown that critical habitat is already a powerful tool, albeit one whose regulatory and economic cost far outweighs the benefit to the species.

The case that has been receiving most of the attention (by virtue of the fact that it has been driving a great deal of the critical habitat litigation in recent months) is the New Mexico Cattle Growers decision out of the Tenth Circuit. In that case, the court found that the Service's process of designating critical habitat was fundamentally flawed. Section 4(b)(2) of the ESA, which governs the designation of critical habitat, contains a "balancing test," whereby the Service is required to base its determination on the best scientific data available, and take into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. The statute further provides that the Service may exclude any area from critical habitat if it determines that the benefits of such exclusion outweigh the benefits of specifying any such area as critical habitat, unless it is determined that the failure to designate such area as critical habitat will result in the extinction of the species. The cattle growers challenged the Service's use of a so-called "baseline approach" to analyzing economic impacts, which attributed virtually all economic impacts associated with any ESA regulation to the listing of the species itself as threatened or endangered, which almost always resulted in a finding that the designation of critical habitat had no economic consequences at all. The Tenth

Circuit found that Congress intended for economic considerations to be a fundamental part of the critical habitat equation, and any formula that reduced those factors to insignificance was contrary to the plain meaning of the statute.

4. Focus on the "Essential" Aspect of Critical Habitat

There are aspects of both of these cases (primarily the Cattle Growers case) that can be used to shift the regulatory focus of critical habitat in a way that might bring it more into line with what Congress originally intended when it adopted the ESA which is a tool to regulate impacts on specific areas that are truly essential to the conservation of the species. Essential. That's a key word in the statutory definition of critical habitat that seems to get lost in the shuffle. The ESA defines critical habitat as those areas that are truly "essential to the conservation of the species." The Sierra Club case pointed up the difference between the concepts of conservation and recovery on the one hand and mere survival on the other. I believe that either the Administration through its interpretation and application of the statute, or Congress through reform, can seize the moment and retake some measure of control over the critical habitat crisis by restoring the focus of critical habitat designation and regulation by giving meaning to the word "essential' in the definition of critical habitat. For the time being, the means to do this is available through the section 4(b)(2) balancing test that was resuscitated by the New Mexico Cattle Growers case.

5. Using the Balancing Test

In defining critical habitat, I believe that Congress used the word "essential" for a reason. Critical habitat is not defined as "all the land and water that could conceivably be used in an effort to ensure the conservation of the species." The word "essential" carries with it a "but for" connotation—if these lands are not designated, conservation will not be possible. For several years, however, my clients have been faced with critical habitat designations that did not seem to take the concept of "essential" into account. It is my belief that prior to the Cattle Growers decision, there was no procedural Governor on the designation process that forced the Service to focus on the "essential" aspect of critical habitat. For example, the critical habitat designation for the Arkansas River shiner was done at a time when the Service was not performing its legal obligation to fully consider the "economic impact and any other relevant impact" of designating critical habitat. This led, in our view, to the designation of 1,150 river miles and nearly 90,000 acres of adjacent riparian zone across four States that was ill considered and not justifiable under the law. The same can be said of another situation faced by many of our clients in southern Arizona. There, a large portion of a critical habitat designation in the thousands of acres for a pygmy owl was centered on an area northwest of Tucson that, on the one hand, was one of the most desirable areas in the state for development, and on the other hand, was perhaps the least valuable area of the owl's habitat in terms of its recovery. In both of these cases, the costs of designation in terms of potentially lost economic development opportunities; reduced property values; clouded entitlements; effects on existing operations; and property and water rights far outweighs the benefits to the species in a majority of the areas covered by the respective designations.

Just this week, however, the Administration provided an example of how a faithful application of the balancing test can work. There are nine species of cave-dwelling invertebrate bugs (most of which wouldn't cover a fingernail) that apparently exist almost entirely within the confines of Bexar County, Texas (in the San Antonio area, near the Texas Hill Country). All nine species of bugs were listed as endangered under the ESA, and critical habitat was subsequently proposed by the Service as a result of a lawsuit that prompted them to do so. The original proposed critical habitat designation covered almost 9,500 acres. After the proposal came out, the Service made a concerted effort to consider not just the potential economic impacts of the proposal, but also considered many things that I believe fall within the catch-all "all other relevant factors" prescribed by the statute, including the conservation efforts and benefits of the State and local governments and numerous private parties. The Service also paid careful attention to the comments submitted by affected landowners and species advocates alike. The process gave the Service the opportunity to stop and really think about "given the needs of the species and the impacts to these people, what do we really need here what is essential." The end result, which was published in the Federal Register on Tuesday, was a critical habitat designation that encompasses, in total, about 1,500 acres. The balancing test can work.

STATEMENT OF WILLIAM J. SNAPE III, DEFENDERS OF WILDLIFE

Introduction

Thank you, Mr. Chairman and Ranking Member of the Subcommittee on Fisheries, Wildlife, and Water. On behalf of Defenders of Wildlife (Defenders), where I am vice-president and chief counsel, as well as our approximately one million members & supporters, I appreciate the opportunity to address the value of critical habitat under the Endangered Species Act ("ESA" or "Act"), 16 U.S.C. Sections 1531 et seq., particularly pursuant to Section 4 and 7 of the Act. 16 U.S.C. §§1533, 1536. I am also chairman of the Endangered Species Coalition Board.

Today I will focus on four basic values of the ESA critical habitat provisions: 1) the legal, or conservation, benefits of critical habitat; 2) the scientific, or biological, benefits of critical habitat; 3) the economic, or value based, benefits of critical habitat; and 4) the social, or common sense, benefits of critical habitat. My overarching theme is that while the critical habitat provisions of the ESA have tangibly benefited species at relatively low cost, the provisions have nonetheless not reached their full potential.

Legal Benefits

The tangible benefit of critical habitat is reflected in at least two basic ways under the ESA. First, the definition of the term critical habitat says that it is the "specific areas" that are "essential to the *conservation* of the species." 16 U.S.C. §1532(5) (emphasis added). See also 16 U.S.C. §1532(3)("conservation" means to use "all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary."). Thus, critical habitat is a fundamental tool in recovering listed species, the goal and mandate of the Act. Second, the ESA Section 7 standards governing "consultations" between the Services (either the Fish and Wildlife Service, FWS, or the National Marine Fisheries Service, NMFS) and a Federal action agency (e.g., Forest Service, Department of Transportation or Army Corps of Engineers) are distinctly different depending upon whether a listed species possesses critical habitat or not. See, e.g., Sierra Club v. U.S. FWS, 245 F.3d 434 (5th Cir. 2001)(discussing and differentiating, inter alia, the "jeopardy" and "adverse modification" standards in ESA Section 7(a)(2)).

No species' ecosystem better illustrates the conservation benefit of critical habitat in this context than the endangered cactus ferruginous pygmy owl of southern Arizona's Sonoran Desert. See, e.g., Defenders of Wildlife v. Ballard, 73 F.Supp.2d 1094 (D. Ariz. 1999)(holding several Federal agency actions illegal based upon lack of adequate Section 7 consultation in an area defined by critical habitat for the pygmy owl). Here, critical habitat for the owl, which the Administration has voluntarily agreed to vacate as it redoes its economic analysis for the designation, has not only spurred the successful and collaborative Sonoran Desert Conservation Plan, but it has also tempered many potentially inappropriate developments in a region that is still thriving with growth. In fact, the temporary lifting of the critical habitat designation has had the negative result of green lighting several troublesome projects opposed by local officials.

Scientific Benefits

As confirmed in a definitive study by Dr. David Wilcove of Princeton University and others, by far the leading contributor to wildlife species imperilment is habitat loss. Not surprisingly, many ESA recovery plans reflect this biological reality. This, of course, is the whole policy point behind the critical habitat provisions in the Act. See, e.g., House Committee on Merchant Marine and Fisheries, H.R. Rep. No. 887 (94th Cong., 2d Sess. at 3). The leading purpose of the ESA is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved." 16 U.S.C. §1532(b). Ecosystems largely consist of habitat.

The piping plover is a good example of a species that undeniably needs habitat protection, as specified clearly, both in its recovery plans and in all leading scientific literature. Yet, the final rules designating critical habitat for the piping plover are under attack by interests either ignorant of or hostile to the goals of conservation. With only 72 adults left in the Great Lakes breeding ecosystem, this species needs all the help it can get in Michigan, Wisconsin and Minnesota, as well as in its wintering range that includes States such as North Carolina, Florida, and Louisiana. Even more challenging for this species is the fact that its habitat—beaches influenced by ocean or river tides—can change from year to year. Unfortunately, the Administration illegally and unwisely excluded vital areas such as Padre Island National Seashore in its final rule for the piping plover's wintering habitat. See, e.g., Center for Biological Diversity v. Norton, 240 F.Supp.2d 1090 (D. Ariz.

2003)(holding critical habitat designation for Mexican spotted owl to be illegal because it improperly evaluated benefits of critical habitat protection).

Economic Benefits

The process of designating critical habitat under the ESA requires the Federal Government to assess important economic information about the species' habitat area. See 16 U.S.C. §1533(b)(2). However, a combination of: 1) severe budgetary constraints; and 2) significant legal confusion regarding the scope of the Act's economic analysis requirement, have hampered implementation of this ESA provision. Perhaps the most glaring present problem is New Mexico Cattle Growers Ass'n v. U.S. FWS, 248 F.3d 1277 (10th Cir. 2001), which held that the FWS must create a second economic baseline to take into account the economic impacts of listing in addition to impacts due to critical habitat alone. The FWS is wasting time and resources complying with this order throughout the entire country, not only because the decision was wrongly decided, but also because it represents bad economics.

No ecosystem better captures the economic centrality of habitat than the Colorado River, one of the most heavily managed and allocated rivers in the world. Like a ribbon of life flowing throughout the arid U.S. West, the mighty Colorado is a whimpering trickle by the time it reaches Mexico, sucked almost dry by the millions of humans dependant upon it. Spurred by the critical habitat designation of large native river fish such as the Colorado squawfish, bonytail chub, and razorback sucker, the Federal agencies have finally initiated a rational plan to serve regional people and wildlife protection known as the Lower Colorado River Multi–Species Conservation Plan (MSCP). Although this MSCP presently possesses several key flaws, it is an improvement over the do-nothing past and can be directly attributed to the critical habitat provision in the ESA. See, e.g., Charles Bergman, Red Delta (Fulcrum Press, 2002).

Social Benefits

The Endangered Species Coalition (ESC), of which Defenders and over 400 other citizen groups across the country are a part, understands that there are frequently misperceptions and sometimes even fear over the critical habitat provisions in the ESA. We think these attitudes are misplaced, but we respect the feelings of those who hold them. We believe the answer includes better public education by the Services, a repudiation of the Cattle Growers case (which we don't think even serves the Cattle Growers themselves), and better linking of critical habitat with the recovery objectives in the Act. It should be remembered that the only direct benefit of critical habitat under the ESA occurs only when a Federal agency action impacts a listed species with critical habitat.

Two highly imperiled species reinforce our recommendations for increased attention to critical habitat protection. First is the Sonoran pronghorn, North America's fastest land mammal, which is down to as few as 20 individuals in the United States, largely as a result of uneconomic and subsidized grazing on Bureau of Land Management (BLM) lands in southern Arizona. Second is the equally

endangered woodland caribou in northern Idaho national forests (i.e., Idaho Panhandle NF), which possesses as few as 12 individuals in the U.S., again as a result of severe habitat loss, in this case old-growth forests. Neither one of these species has the protection of Section 4(b)(2) of the ESA because they were listed before the critical habitat provision became mandatory in 1978. Both species need and deserve critical habitat protection immediately.

Conclusion

For many inter-related reasons, some plainly obvious and others more nuanced, critical habitat is a central aspect of the ESA. Its fate in the coming months and years deserves serious discussion. We support proposals that would strengthen both the ecological and economic implementation of critical habitat for threatened and endangered species. In this regard, we stand with our professional colleagues at the National Wildlife Federation, which is also testifying on this important topic this morning. Thank you for your attention.

ATTACHMENT: CRITICAL HABITAT WORKS FOR ENDANGERED SPECIES, CENTER FOR BIOLOGICAL DIVERSITY (2003).

Critical Habitat is Essential to Ecosystem Protection

The Endangered Species Act (ESA) relies on two broad strategies: the listing of species as threatened or endangered, and the designation of critical habitat areas. The listing of species requires that private citizens, States, and Federal agencies not "jeopardize" endangered species and that they attempt to mitigate any harm (i.e.

"take") done to them. The ESA's take limitations only apply to the small areas where the species still exist. It does not apply to the much larger area where the species used to live, and where it must reestablish itself if it is to recover. Listing, in and of itself, has proven an effective shield against extinction, but is not sufficient to recover and delist species.

In adding the critical habitat provision to the ESA, Congress clearly saw that species-based conservation efforts must be augmented with habitat-based measures:

> "It is the committee's view that classifying a species as endangered or threatened is only the first step in insuring its survival. Of equal or more importance is the determination of the habitat necessary for that species' continued existence . . . . If the protection of endangered and threatened species depends in large measure on the preservation of the species' habitat, then the ultimate effectiveness of the Endangered Species Act will depend on the designation of critical habitat."[1]

Critical habitat contains "all areas essential the conservation of the species" where "conservation" is defined as full recovery. They contain most or all of the places where the species still persists, but more importantly, they contain areas where the species used to live and where it must reestablish itself in order to recover. Federal agencies are not permitted to "adversely modify" critical habitat areas. They must instead manage them for the recovery of the species and the ecosystem upon which it depends. Critical habitat does not affect private lands unless their development requires Federal permits.

Critical Habitat Works

In 1994 and 1996, the U.S. Fish and Wildlife Service assessed the status of all threatened and endangered species under its jurisdiction.[2] Of the 560 species with a known status in 1994, those with critical habitat were 11 percent less likely to be declining and 14 percent more likely to be stable than species without critical habitat.[3] Of the 697 species with a known status in 1996, those with critical habitat were 11 percent more likely to be improving and 13 percent less likely to be declining than those without critical habitat.[4] The benefits of critical habitat accrue over time: those with critical habitat for over 5 years were in better shape than those with critical habitat for 5 years or less.

The following examples show how critical habitat designation makes real, on-the-ground improvement for ecosystems and species.

Peninsular Bighorn Sheep. The Peninsular bighorn sheep inhabits the foothills of Southern California's Peninsular Mountain Ranges. It has declined by 77 percent due to diseases spread by livestock, overgrazing by livestock, ORVs, roads, and urban sprawl. Though the Fish and Wildlife Service first announced in 1985 that it may be endangered, and listed it as an endangered species in 1998, little was done to protect its habitat. By 2000, there were just 334 animals left, leaving more golf courses in the Palm Springs area than bighorn sheep.

In 2001, the U.S. Fish and Wildlife Service designated 845,000 acres of critical habitat. Suddenly, land management began to change. The Bureau of Land Management removed livestock from all 226,026 acres of critical habitat under its jurisdiction, closed illegal roads, and instituted seasonal road closures in critical lambing areas. These protections were not offered to areas outside critical habitat. The U.S. Forest Service likewise removed livestock from all 17,982 acres of critical habitat under its jurisdiction. Local cities have enacted growth decisions to protect portions of the bighorn's critical habitat.

Desert Tortoise. Desert tortoises in the Mojave Desert have declined by 90 percent since the 1930's due to livestock overgrazing, car collisions and respiratory disease. Though biologists first warned of its possible extinction in 1970 and the U.S. Fish and Wildlife Service listed it as an endangered species in 1994, few proactive steps were taken to protect its habitat. In response to complaints that its critical habitat areas were being degraded, the Bureau of Land Management issue decisions in 2000 and 2001 prohibiting new or expanded mining operations on 3.4 million acres of the critical habitat, prohibiting or limiting livestock grazing on 2.2 million acres of crit-

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[1]House Committee on Merchant Marine and Fisheries, H.R. Rep. No. 887, 94th Cong. 2d Sess. at 3(1976).

[2]U.S. Fish and Wildlife Service, U.S. Department of the Interior Report to Congress, Recovery Program, Endangered and Threatened Species (1994); U.S. Fish and Wildlife Service, U.S. Department of the Interior Report to Congress, Recovery Program, Endangered and Threatened Species (1996).

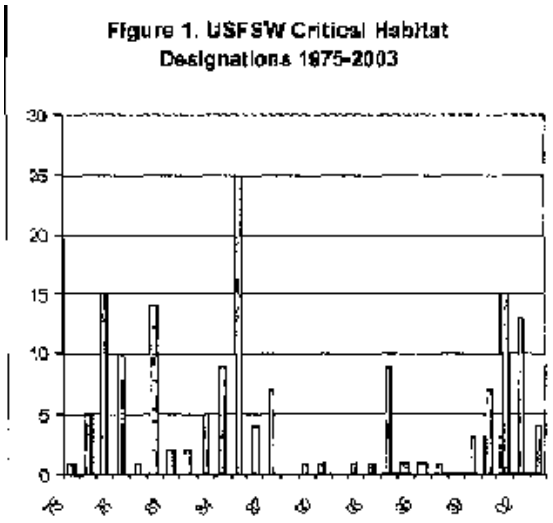
[3]Jeffrey Rachlinski,"Noah by the Numbers: An Empirical Evaluation of the Endangered Species Act," 82 Cornell Law Review 356–89 (1997).

[4]Martin Taylor and Kieran Suckling, "An empirical assessment of the effect of critical habitat, recovery plans, and economic conflict on the status of endangered species," Center for Biological Diversity, Tucson, AZ.

ical habitat, closing approximately 4,500 miles of illegal roads, and prohibiting off-road vehicles on approximately 500,000 acres of the critical habitat. Tortoise habitat outside designated critical habitat zones were not given these protections.

Steller Sea Lion. In western Alaska, Steller sea lion populations have plummeted by up to 90 percent since the 1970's, due in part to a massive increase in large-scale commercial fishing. The National Marine Fisheries Service listed the sea-lion as a threatened species in 1990, designated critical habitat in 1993, and upgraded it to endangered status in 1997. In response to complaints about overfishing within critical habitat zones, the National Marine Fisheries Service closed or limited specific commercial fisheries within the sea-lion's critical habitat. High levels of fishing still occur outside the critical habitat areas.

Agency Resistance Reflects Illegal Reagan Era Policy



Since habitat loss is the primary cause of endangerment for 84 percent of all listed species, Congress stipulated that barring rare circumstances, all species should have critical habitat areas. Prior to 1987, the U.S. Fish and Wildlife Service regularly implemented this portion of the ESA (see figure 1). After 1987 the U.S. Fish and Wildlife Service rarely designated critical habitat. The shift came in response to a policy enacted by the Reagan Administration eliminating recovery as the standard for critical habitat management.[5] Instead, Reagan required that critical habitat be managed under the much narrower extinction avoidance standard. In this emasculated form, critical habitat added little to the protections which automatically ensue with species listing. As University of Virginia School of Law professor E. Perry Hicks wrote:

> "Historically this protection [critical habitat] has had enormous practical consequences, but subsequent to the Department of Interior's 1986 amendments to regulations implementing section 7 of the ESA, it is doubtful that critical habitat has any practical value."[6]

In the late 1990's, endangered species advocates won a series of lawsuits putting critical habitat designation back on track. In 2001, the 5th circuit court of appeals struck down the Reagan policy, affirming that critical habitat must be managed at the higher recovery standard.[7] In 2001, a similar decision was rendered in the 9th

[5]50 C.F.R. 402.02 (1986).

[6]E. Perry Hicks, "Designation Without Conservation: The Conflict Between the Endangered Species Act and its Implementing Regulations," Virginia Environmental Law Journal (2000).

[7]Sierra Club v. U.S. Fish and Wildlife Service and National Marine Fisheries Service, 245 F.3d at 441–42.

circuit.[8] Thus the stage has been set for improved ecosystem management through critical habitat designation.

Bush Administration Slashing Critical Habitat Designations

The Bush Administration has adopted an illegal policy prohibiting final critical habitat rules from expanding upon proposed rules, even if such expansion is called for by scientific peer reviewers. Between the proposed and final decisions, it decreased the size of 75 percent of the 32 critical habitats it designated in 2001 and 2002. It did not increase the size of any. Cumulatively, the proposed designations were reduced by 51 percent, thus depriving almost 39 million acres of habitat protection.

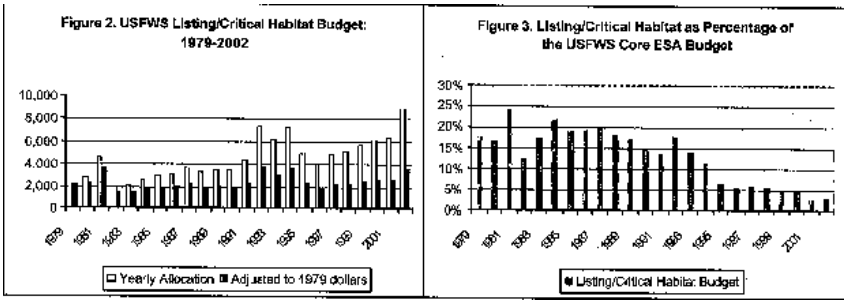
In the case of the San Bernardino kangaroo rat, the administration reduced the proposed rule by 22,113 acres, contradicting all six peer reviewers. In the case of the Mexican spotted owl, it reduced the critical habitat proposal by 8.9 million acres over the objections of agency biologists. A Federal judge struck down the decision in January 2003, calling the designation "nonsensical" because it excluded over 90 percent of all known owl locations and virtually all lands under actual threat of logging.

Budget Being Used as a Weapon Against Critical Habitat and Listing

Ignoring the fact that species with critical habitat are recovering faster than those without, ignoring the many examples of critical habitats being managed better than non-critical habitat areas, and ignoring the court orders striking down the 1986 Reagan policy, the Bush Administration continues to insist that critical habitat protection should be limited to avoiding extinction and is thus duplicative of the protections that ensue with listing. Thus the Bush Administration attempts to justify its refusal to protect endangered species' habitats.

Unable to sway the courts or environmentalists, the Bush Administration is using its budget authority as a weapon to limit both the designation of critical habitat and the listing of endangered species. While the U.S. Fish and Wildlife Service says it needs $137 million to address the backlog of critical habitats and listings,[9] the Bush Administration asked Congress for just $9 million in fiscal year 2003 and $12.3 million for fiscal year 2004. The requests are so inadequate that the Fish and Wildlife Service has announced that it will not be able to list any species or designate critical habitats in fiscal year 2003 other than those already ordered by the courts.[10] It is no wonder that in 2001 and 2002, the Bush Administration listed fewer species under the ESA than any 2 year period since Reagan in 1982–1983.

While all other USFWS ESA line items have increased at least 1,319 percent since 1979, the listing and critical habitat budget increased just 406 percent. Accounting for inflation, it has remained nearly static since 1979 (see figure 2). As a proportion of the total USFWS ESA budget, listing and critical habitat has declined from 24 percent to 3 percent (see figure 3).



[8]Natural Resources Defense Council et al. v. United States Department of Interior et al., CV 99 5246 SWV (CTx).

[9]J. R. Pegg, "Conservationists Warn of Bush Budget Tricks," Environmental News Service, February 5, 2003 <http://ens-news.com/ens/feb2003/2003–02–05–10.asp>

[10]Letter from Anne Badgley, Regional Director, Pacific Region, U.S. Fish and Wildlife Service, to Mike Peterson, Executive Director, The Lands Council, February 10, 2003.

RESPONSES OF WILLIAM SNAPE TO ADDITIONAL QUESTIONS FROM SENATOR CRAPO

Question 1. Should Congress carve out a distinct role for critical habitat in an amended ESA, and provide a more coherent definition of "critical habitat" in ESA Sec. 3(5)?

Response. We believe the definition of critical habitat in the aforementioned section is clear, distinct and coherent.

Question 2. For example, should all lands needed for the recovery and delisting of a larger population of a listed species be designated as critical habitat?

The answer to this question depends upon the species and habitat in question. Generally speaking, we believe the Act already requires critical habitat to be a central tool in the recovery of listed species. In our view, the plain language of Sections 3(5)(A) and 3(5)(C) already properly describes and defines the geographic area to be included in critical habitat designations. In fact, the ESA defines critical habitat as all geographic areas "essential for the conservation of the species" i.e., recovery. See ESA §3(3).

Question 3. For example, since many different combinations of lands could satisfy recovery objectives, how should FWS choose which lands to designate as critical habitat? Should Federal lands be chosen over private lands?

Response. As you know, the ESA now requires a two-step process for designating critical habitat under Section 4(b)(2) of the ESA. First, "on the basis of the best scientific data available," the implementing agencies should determine what the species in question biologically needs for conservation. Second, the biological needs are tempered by the requirement of "taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat." We think this is a balanced approach.

In terms of Federal lands and private lands, the same two-step process should be utilized, remembering that the "Secretary may exclude any area from critical habitat if (s)he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless (s)he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned." Id. Again, we believe this is a balanced approach.

Thus, an assessment of Federal, State, private and other geographic areas cannot be answered generically, but depends upon the best scientific data available for the species in question and an accurate assessment of the impacts of a critical habitat designation. For example, the highly endangered Sonoran pronghorn and Woodland caribou neither of which possess critical habitat have the vast majority of their remaining habitat on Federal land, but both species are on the brink of extirpation in the U.S. because the applicable Federal agencies have not done all they can do for them. Conversely, the endangered pygmy owl is dependant upon conservation on private lands, and critical habitat designation on these lands is necessary and appropriate.

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION

The American Farm Bureau Federation (AFBF) appreciates the opportunity to submit this statement for the hearing record.

Farms and ranches comprise much of the privately owned open space in this country. Farmers and ranchers own much of the habitat for endangered or threatened species, and for all wildlife. Approximately 76 percent of all listed species occur to some extent on privately owned lands and more than one-third occur exclusively on privately owned lands. Agricultural lands are also the buffers between wildlife habitat and development.

Section 4 of the Endangered Species Act requires that "critical habitat" be designated for any listed species unless such designation is not prudent or would not benefit the species. "Critical habitat" is defined as "the specific areas within the geographical area occupied by the species" on which are found "those physical or biological features essential to the conservation of the species and which may require special management considerations or protection." Critical habitat may also include habitat currently not occupied by the species "upon a determination by the Secretary that such areas are essential for the conservation of the species." Critical habitat may include privately owned lands as well as Federal, State or tribal lands.

Critical habitat was envisioned as only area that is essential for the species, to the point where "special management considerations" might need to be imposed. "Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the species."

Section 4 of the ESA also requires the Secretary to determine critical habitat only after "taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat." This requirement is important because it is one of only two places in the entire Endangered Species Act that Congress specifically allows economic impacts to be considered in making decisions.[1] The Secretary "may exclude any area from critical habitat if he determines the benefits of such exclusion outweigh the benefits of specifying such area," unless the species will become extinct if critical habitat is not listed.

The effect of designating an area as "critical habitat" may cause serious consequences to the owner or user of the designated land. The section 7 consultation requirements will be applied any time a landowner seeks to undertake any action with a Federal nexus that may result "in the destruction or adverse modification of critical habitat," a circumstance not present on lands not so designated. "Adverse modification" is broad enough to include almost any action taken on critical habitat lands. This can result in the loss of use of lands designated as critical habitat. In addition, critical habitat designation allows land to be restricted by the Endangered Species Act even when there are no listed species on that land.

Since critical habitat lands are defined as areas "which may require special management considerations or protection," they are always subject to the possibility that their use may be further restricted to fulfill the purpose of the designation. Landowners are hesitant to make full use of critical habitat lands because of this.

At least one study conducted in the habitat area for the black-capped vireo and golden checked warbler near Austin, Texas, found that property values declined significantly for areas designated as critical habitat.

Designation of critical habitat had not been a high priority of the Department of Interior under previous administrations. As a result, despite a rising number of species listings, fewer and fewer "critical habitat" designations were made. That all changed when courts began ordering the Department to designate critical habitat.

Following are some concerns and issues of the American Farm Bureau Federation with regard to critical habitat.

1. The Department Must Give Full Consideration to Economic Impacts as Required by New Mexico Cattle Growers Decision

The New Mexico Cattle Growers decision marks a milestone in the evolution of critical habitat designations. It required the full economic impacts of critical habitat designation be considered and weighed against the benefits of designation. Prior to that decision, the Department of Interior had only given lip service to the economic impact requirement. The court ruled that the method the Department had employed in analyzing the economic impacts of critical habitat designations was wrong. Every critical habitat designation made up to May 11, 2001, was therefore wrong.

There has been little visible progress in complying with this court decision. No new regulations have been proposed. No new guidance or policy seems to have been enacted. No process for correcting the erroneous pre–2001 designations has been proposed.

Critical habitat designations can cause significant economic impact to farmers and ranchers. Productive farm and ranch lands can lose much of their value if their use is restricted due to critical habitat designation. Critical habitat on farm or ranch lands will also subject farmers and ranchers to section 7 consultations for virtually any action they propose to take within the critical habitat area.

It is extremely important that the full economic impacts of a proposed designation on privately owned farm or ranch lands be considered before a designation is made. If the cost to the landowner is greater than the benefits of designation of critical habitat to the species, then that farm or ranch land should not be included within the critical habitat. This should apply not only to future designations, but also to all of the designations that were done improperly.

Full economic consideration is not only desired, but is required. An unchallenged Federal appellate court decision ruled against the old method for conducting economic analyses nearly 2 years ago. It is past time to implement this decision.

2. Critical Habitat Should Not be Designated in Areas Not Occupied by the Species Unless there is Conclusive Proof that the Area is Essential for Conservation

Another major issue of concern to farmers and ranchers is the designation of critical habitat that includes areas not currently occupied by the species. The problem is especially acute in cases of river or stream habitat where uses are restricted and buffer zones imposed on areas designated as critical habitat.

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[1]The rarely used Endangered Species Committee is the other.

For example, the Department of Interior recently designated over 1,100 miles of rivers in Oklahoma, Texas, New Mexico and Kansas as critical habitat for the Arkansas River Shiner. Of the 1,100 miles designated, about half currently contains shiners. The designation also includes buffer zones of 300 feet on each side of waterways designated as critical habitat. Almost 99 percent of the land along the designation is privately owned. This situation creates significant hardship for farmers and ranchers and all landowners in the designated area.

The designation was made with very little explanation why "essential" habitat must include twice as much river area as is now occupied. Arkansas River Shiners do not require exclusive territory within a river. Instead of bearing the burden to justify its decision, the Department has placed the burden on challengers of the decision to prove why the decision was wrong.

The concept of critical habitat was designed to specially protect those areas essential for the species. As such, Congress allowed critical habitat lands to be burdened with greater restrictions than non-designated lands. As a result, there must be greater justification given by the Department for placing those restrictions on private lands.

This is especially true in the case of unoccupied lands being included within a designation. The ESA does not permit restrictions to be placed on such lands if they are not part of a critical habitat designation and extreme care must be exercised to ensure unwarranted or unnecessary restrictions in the name of critical habitat are not placed on lands not otherwise subject to Federal restriction.

The need for proceeding cautiously in designating unoccupied habitat as "critical" is even greater when considering the intended purpose of critical habitat. As lands "essential for the conservation of the species," it is more difficult to justify including lands not occupied by that species.

It is therefore imperative that "critical habitat" be limited to currently occupied habitat, unless there is conclusive proof demonstrated by the designating agency that such unoccupied habitat will become inhabited in the near future if protected and unless the agency also conclusively proves the unoccupied habitat is essential for the conservation of the species.

3. Congress Must Reinforce the Original Intent of the Critical Habitat Concept and its Relationship to Non–Designated Species Habitat

There are some who see little value to critical habitat. They argue that the concept adds nothing to the protection of species or habitat. A major reason for this perception is the administration of the ESA has encroached on land use restriction to a far greater degree than Congress intended. The Department itself questioned the usefulness of critical habitat in a guidance proposed in 1999 (but never enacted).

Congress seemed to intend that "critical habitat" should mean the specific areas within the geographical range of the species that is essential for survival. It is to be subject to "special management considerations or protections," which is beyond what Congress had in mind for other habitat. Critical habitat is thus an important part of the statutory scheme. It is supposed to be the habitat of a species where the agency is to focus its management activities in order to conserve the species. The definition specifically provides that "Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species."

Federal agencies that loosely and wrongly interpret the "critical habitat" area too broadly, apply the same restrictions to a species' entire habitat as are supposed to be applied to truely critical habitat. Such an interpretation ignores the special nature of critical habitat, the special management considerations it envisions and is directly contrary to the above-cited provision that it shall not include the entire habitat.

In Sweet Home Chapter of Oregon v. Babbitt, the U.S. Supreme Court specifically rejected the notion that all habitat was subject to the regulatory reach of the Fish & Wildlife Service under the ESA. The Court interpreted the "harm" definition within section 9 of the Act to reach habitat modifications that actually resulted in physical impacts to the species. Under the reach of that case, any adverse impacts to habitat that is not critical and that does not physically impact a member of the species in not actionable.

The interpretation of Sweet Home would also explain the distinction between the standards of "jeopardize the continued existence of the species" and the "adverse modification of habitat determined to be critical." The former is applied to actions that might apply to the species directly, while the latter is applied to actions affecting habitat. Since critical habitat is defined as habitat "essential to the conservation of a species," the two standards can be interpreted almost the same, but only in the context of a viable critical habitat provision. For a species without designated crit-

ical habitat, the section 7 consultation provision can only apply to actions directly affecting the species.

In order for "critical habitat" to have meaning, Congress must reinforce its original intent as habitat that is essential for the conservation of the species, and which may require special management considerations.

4. Private Landowners Should Not Be Penalized for Critical Habitat on their Property

As indicated above, private landowners may suffer significant economic impacts as a result of having part, or all, of their lands designated as "critical habitat" for a listed species. The value of their land may decline as a result of the designation, they may be restricted in how they might use their land, or they may be burdened with additional section 7 consultation costs and obligations.

Privately owned lands when correctly designated as "critical habitat," provide a significant public benefit. They are deemed "essential" for the conservation of a listed species and possibly might prevent that species from becoming extinct. Private landowners should not be expected to bear this cost alone.

It is incumbent upon the government to share in the cost of maintaining this habitat that is essential for a listed species. There is a real opportunity for the government to provide an innovative program to maintain essential habitat, enhance the species and not penalize the owner of the land on which essential habitat is found.

Purchasing ownership or conservation easements in critical habitat is one answer, but should not be viewed as the first or only option. We firmly believe providing incentives to private landowners to maintain critical habitat offers the best opportunity to recover the affected species. Active management through landowner participation reaps greater benefits than passive management or negative enforcement. If critical habitat is to have any meaning, or any role in species conservation, landowners must participate in its maintenance and management.

We strongly urge Congress to enact a program that recognizes the contributions of private landowners with critical habitat on their property and also recognizes the public responsibility to assist them in maintaining habitat that is critical for a listed species.

5. Military Exemption from Critical Habitat Requirements Will Likely Increase the Burdens on Private Landowners

We strongly support the adequate training and military preparedness and readiness of our military. Restrictions placed by environmental statutes should not hamper the readiness or diminish the training of our armed forces.

Lost in the debates on the requested waivers for the military, however, is the fact that private landowners adjacent to or near affected military bases are likely to shoulder the increased burdens of additional habitat requirements for listed species. Critical habitat that would not be placed on military training grounds will likely instead be placed on privately owned lands.

We ask Congress and Federal agencies to consider how these private landowners will be compensated for assuming these additional restrictions.

STATEMENT OF C. KENT CONINE, NATIONAL ASSOCIATION OF HOME BUILDERS

Chairman Crapo, and members of the Fisheries, Wildlife, and Water Subcommittee, I am pleased to share with you the views of the National Association of Home Builders (NAHB) concerning the designation of critical habitat under the Endangered Species Act (ESA). My name is Kent Conine. I am a homebuilder and developer from Dallas, Texas, and the 2003 President of the National Association of Home Builders. I submit this testimony on behalf of our 205,000 NAHB members.

NAHB's membership consists of individuals and firms who develop land and construct homes and apartments, as well as commercial and industrial projects. While our members are committed to environmental protection and species conservation, oftentimes well-intentioned policies and actions by regulatory agencies result in plans and programs that fail to strike a proper balance between conservation goals and needed economic growth. In these instances, our members are faced with increased costs attributed to project mitigation, delay, modification, or even termination. Within the context of the Endangered Species Act, these difficulties are often attributable to species listing and the designation of critical habitat.

When homebuilders develop land and construct homes and apartments, the process may occur within or adjacent to an area where there may be endangered or threatened species or their habitats. As a result, in seeking to comply with the ESA,

many of our members are prevented from developing their property or are required to submit to extensive mitigation requirements in order to move forward.

Setting aside the community benefits of developing balanced neighborhoods, the economic impact of home building extends itself deep into the economy of the U.S. The economic activity generated by home building is three to four times the typical homebuyer's down payment. Hence, a typical $34,000 down payment on a new home generates nearly $160,000 in new economic activity (the underlying land value is subtracted from the calculation). Many aspiring homebuyers, however, are just on the edge of being able to qualify for a mortgage and make the required payments. Even a small change in home prices, interest rates or delays in construction can determine whether they can buy a home.

Home builders are generally entrepreneurial members of the small business community. 82 percent of home builders build fewer than 25 homes a year and 60 percent of our members build fewer than ten homes a year. Many of these small-volume builders and subcontractors do not have the capital to withstand the devastating effects of an accidental or intentional error in an ESA decision.

Therefore, NAHB believes the listing of species as threatened or endangered and the designations of critical habitat for those species must be based on reliable, accurate and solid biological and scientific data.

We wholeheartedly agree with the testimony put forth by Assistant Secretary Manson at this hearing, and echo his statement that "simply seeking additional funding for this program is not the solution." More money is not the answer to the ESA's problems. Rather, we believe it is time that serious thought and meaningful action is devoted to fixing the ESA and its administration of America's endangered species.

NAHB remains concerned that critical habitat has been and continues to be designated in vastly expansive swaths without conducting the rigorous scientific and economic analyses that Congress requires. In general, we believe that there are four key reasons why critical habitat designations under the ESA are failing to be implemented as statutorily defined. These four concerns, further expanded upon below, address both the breadth and basis of critical habitat designations for species listed under the ESA.

1. Congress did not intend for critical habitat to encompass the species' entire historic range or all potential habitat areas that the species may use. Critical habitat is a more defined, smaller subset of the species' geographic range.

The ESA directs that "critical habitat" can be designated in two types of "specific areas": (1) Specific areas within the geographical area occupied by the species, if they contain biological features that are essential for the conservation and require special management considerations or protection; and (2) Specific areas outside of the geographical area occupied by the species if they are found to be essential for that species' conservation. In any case, critical habitat normally cannot include the entire geographic area that can be occupied by the listed species.

Courts have relied on these statutory provisions and decided that Congress intended critical habitat to be designated in terms of restricted geographic scope. Two particular cases have determined that "critical habitat" must only encompass areas which are "absolutely essential" to species' survival. See Northern Spotted Owl v. Lujan, 758 F. Supp. 621 (W.D. Wash. 1991) and Middle Rio Grande Conservancy Dist. v. Babbitt, No. CIV 99–870, 99–872, and 99–1445M/RLP (consolidated), at 17 (D.N.M. 2000). These cases correctly stand for the proposition that critical habitat must represent a more narrow, carefully delineated segment of the overall historic, geographic, and potential range of the species.

The legislative history bears this out. NAHB believes that Congress intended "critical habitat" to be a narrower area than the species' entire historic or geographic range. When Congress enacted the ESA in 1973 and during subsequent amendments in 1978 and 1982, it emphasized the concern that critical habitat was being designated more broadly than the Act allowed. Specific amendments in 1978 were intended to ensure that designated habitat did not encompass all land, air, and water environments of the species, but were instead limited to "essential areas" within those environments.

Despite the clarity of the statute, however, geographic limitations are not always observed in practice. The final critical habitat designation for the Southwestern Willow Flycatcher, for example, was written to include areas that "contain the remaining known southwestern willow flycatcher nesting sites, and/or formerly supported nesting southwestern willow flycatchers, and/or have the potential to support nesting southwestern willow flycatchers." (62 FR 39133)

2. Critical habitat reflects a narrow concept that must be limited to "specific areas" that FWS finds are absolutely "essential" for species conservation, concepts that are oftentimes overlooked or ignored in critical habitat designations.

The ESA defines "critical habitat" as:

"(i) the specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential for the conservation of the species and (II) which may require special management considerations or protection; or

(ii) specific areas outside the geographical area occupied by the species . . . [that] are essential for the conservation of the species." (16 U.S.C. §1532(5)(A).)

Two key phrases stand out in these statutory definitions. First, critical habitat contemplates "specific areas." Second, those specific areas must be "essential for conservation."

"Specific Areas": In using this term, Congress strove for precision. Regulators, affected municipalities, conservationists and property owners alike would all benefit if they knew, exactly, where the species is found. Programs to conserve listed wildlife will be more efficient if stakeholders all know what areas, precisely, warrant heightened regulation and protection. Recent history, however, seems to challenge this common sense approach.

Of continuing concern for NAHB is the refusal of the Services to provide stakeholders with the specific locations where an endangered species may be known to exist, including the disclosure of unpublished and uncorroborated data used in the designation of critical habitat. In the case of the Pygmy Owl, the U.S. Fish and Wildlife Service (FWS) failed to respond to a 1998 FOIA request and a 2002 court order to provide NAHB with information on all known numbers and locations of the Pygmy Owl. Only recently, after four-and-a-half years of litigation, has NAHB finally acquired information on the location of Pygmy Owls in southern Arizona.

Furthermore, some critical habitat designations have been criticized for reading the term "specific areas" out of the Act. For example, the final designation rule for Pacific Northwest Salmon simply states that critical habitat covers "all river reaches accessible to listed [salmon] within the range" of the fish. The Salmon final designation rule further states that critical habitat comprises "the water, substrate, and adjacent riparian zone" of over 150 watersheds, river segments, bays and estuaries throughout northern California, Oregon, Washington, and Idaho. In the future the Services should strive to avoid the vague descriptions that characterize the designations for this and other species. Such descriptions do little to provide insight to what specific areas may or may not be covered by a critical habitat designation.

"Essential for Conservation": The second key term in the ESA's definition of critical habitat is "essential for conservation." The term "essential" is an important qualifier, and limits consideration of critical habitat to those areas that are absolutely necessary to achieve conservation to the point that the species no longer needs to be listed. Congress's use of the word "essential" in defining critical habitat comports with our first principle that designated areas are not as broad as geographic ranges but must be restricted to areas that are absolutely necessary and important to the species' conservation.

The Fifth Circuit's decision in Sierra Club v. FWS and NMFS (March 15, 2001) (hereafter, Sierra Club) should not be misinterpreted to ignore the terms "specific areas" and "essential" in the Act's critical habitat definition. In opining on the "adverse modification" regulation, the Fifth Circuit held that Section 7 consultation is required "where an action affects recovery alone; it is not necessary for an action to affect the survival of a species." The court stated that the ESA "distinguishes between 'conservation' and 'survival,'" and that "[r]equiring consultation only where an action affects the value of critical habitat to both the recovery and survival of a species imposes a higher threshold than the statutory language permits." (Id.)

Even if the Fifth Circuit is correct that consultation (under Section 7) can be triggered under a recovery standard independent from a survival standard, this does not mean that critical habitat must be defined (under Section 3) or designated (under Section 4) based on a broad recovery standard one that would improperly encompass huge expanses of historic and potential habitat with nebulous parameters. In other words, critical habitat is not habitat generally "for" recovery or generally "for" conservation. Rather, critical habitat is restricted to "specific" areas that the Service determines are "essential" for conservation.

Congress was clear in its determination that critical habitat should be composed of those areas that are found to be "essential for conservation" of a species. To this end, NAHB is concerned that any legislation that would tie critical habitat designations to the recovery planning stage would sweep broader areas into the regulatory net than Congress intended. If critical habitat were to be tied to a recovery plan, the boundaries of critical habitat areas would likely coincide with the larger area of "recovery habitat," thereby raising the standard for designation. Furthermore, the text of the ESA, legislative history, and case law all make clear that recovery plans

serve as guidance documents, and do not have the force and effect of law. If critical habitat the designation of which does have regulatory impact is to be determined as part of the recovery planning process, the unintended consequence would likely be that the elements of the recovery plan would be transposed as having binding, legal effect on private parties.

3. The "best available science" must provide the basis for the Services' biological finding that "specific areas" are "essential" for conservation. However, the Services have not always used the best available science to yield rational determinations of occupied and unoccupied areas.

The ESA requires that the Services use the "best available science" to make a determination of areas within the "geographic area" that are "essential to the conservation" of the species. The U.S. Supreme Court has emphasized that the "best available science" standard ensures that the ESA is not implemented on the basis of mere guesswork. Accordingly, only the "best available science" can support the Services' findings that certain specific areas contain the biological features essential for the species' conservation.

Past, glaring examples of misconduct however do little to reinforce a sense of trust in the Service's ability to make use of this scientific standard. The admission of several Forest Service and FWS employees of planting false samples of Canadian lynx hair in Washington State national forests, as well as the use of faulty data of spotted owl habitat to block logging projects in California (which, as a result, resulted in the payment of $9.5 million in damages to a logging company), call into question the objectiveness of the science utilized by the Services.

In using the "best science available" standard prospectively, the Services must limit both the occupied and unoccupied areas to only those segments that are "essential for conservation." By doing so, the Services will ensure that the entire geographical area occupied or (unoccupied) is not designated. In order to properly limit areas that are "essential for conservation" the Services should endorse a common sense, scientific approach to "occupied" habitat. Some past critical habitat designations have construed "occupied" too broadly, to avoid the necessary finding that certain unoccupied areas are deemed essential for conservation.

For example, 1.2 million acres of critical habitat were treated as "occupied" by 36 Pygmy Owls in southern Arizona. Similarly, the final critical habitat rule for the Coastal California Gnatcatcher designates over half a million acres 513,650. Yet, in the Gnatcatcher rule, U.S. FWS determined that the bird occupied only 54,000 acres. It is inconsistent with the vision of Congress to protect 459,650 unoccupied acres or 89 percent of the entire designation as "critical" habitat.

Under the Act "unoccupied" areas may also be designated as critical habitat but only where the Secretary specifically finds that the unoccupied area is "essential to conservation." The Services have an affirmative obligation to find that unoccupied areas are "essential for conservation" before they are incorporated into a final critical habitat designation. In short, the Services' authority to designate "unoccupied" critical habitat areas is limited and exceptional, and must be supported by sound scientific data.

4. Once the specific areas that are biologically "essential" for conserving the species is determined based on the "best available science," an economic analysis must be completed to exclude any area from critical habitat if the benefits of such exclusion outweigh the benefits of designation. In the past, economic analyses have failed to incorporate the direct, indirect, and cumulative impacts of critical habitat designations.

For years, the rallying cry of the regulated community has been to require the Services to conduct a thorough economic analysis on the impacts of critical habitat designations. The ESA requires that the Services designate critical habitat based on the "best scientific data available and after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat." FWS's own regulations require the consideration of the "probable economic and other impacts of the designation." (50 C.F.R. §424.19)

However, in the past the Services have argued in court and elsewhere that designation of critical habitat does not have an economic impact above and beyond listing of a species. One circuit court of appeals has invalidated this "incremental" approach to the evaluation of the economic impacts of critical habitat. New Mexico Cattle Grower's Assn. v. U.S. Fish and Wildlife Service (10 Cir. May 11, 2001). Analysts have also criticized the incremental approach, noting that the recent rash of court orders requiring designation of critical habitat under strict deadlines have been supported by inadequate economic analyses.

In New Mexico Cattle Growers Assn. v. U.S. Fish and Wildlife Service, the court held that the baseline approach to economic analysis used by the Service there was not in accord with the language or intent of the ESA. The court further took note

of the Sierra Club decision and stated: "[T]he regulation's definition of the jeopardy standard as fully encompassing the adverse modification standard renders any purported economic analysis done utilizing the baseline approach virtually meaningless. We are compelled by the canons of statutory interpretation to give some effect to the congressional directive that economic impacts be considered at the time of critical habitat designation." In accordance with the 10th Circuit decision, the Services shall avoid their previous position that there is only "incremental" economic impact from the designation of critical habitat above and beyond the listing of the species.

Indeed, recent independent studies have continued to challenge the methods by which the Services conduct economic analyses. A recent case study by the California Resource Management Institute suggests that the FWS underestimated the costs of the critical habitat designation for vernal pool species in California by seven to 14 times.

Accordingly, NAHB recommends that the Service should specify, in guidance, certain factors for consideration in an economics analysis for critical habitat designations. For example, guidance could specify that areas can be excluded from critical habitat designation in light of studies showing the designation's impact on: public works projects; transportation projects; job loss; the availability and cost of housing; the ability of affected counties, cities and municipalities to issue development approvals and conduct land use planning processes within their respective jurisdictions; increased costs to navigate heightened regulatory processes; impacts on the lending and banking communities; and the price and tax implications on affected real estate.

Moreover, NAHB suggests that Services should consider the cumulative economic impacts of critical habitat designations. Had the Services been compelled to consider the cumulative economic consequences that flow from multiple critical habitat designations, it is doubtful that we would see the myriad of designations that have caused 1/3 of the State of California to be designated as critical habitat.

The costs attributed to critical habitat designations can be staggering. For example, Arizonans living in Pima and Pinal counties will be faced with as much as $108 million in costs as a result of proposed Pygmy Owl critical habitat. It is for this reason that NAHB believes the Services must be made to follow their statutory mandate to exclude any area from the designation of critical habitat if the economic and other impacts of the designation outweigh the benefits of the designation.

Furthermore, NAHB believes that the Services must foster a notion of predictability and transparency through the establishment of clear criteria and formal procedures for the process by which the benefits of inclusion and exclusion are balanced under §1533(b)(2). Of course, it goes without saying that the Services should not exclude specific areas if they determine, based on the best available science that the exclusion will result in the extinction of the species. As mentioned previously, our members are committed to environmental protection and species conservation, but are looking to the Services to adopt policies and promulgate regulations in processes that are legal, equitable, fair, and consistent with the ESA and its intent and interpretation.

Conclusion

In conclusion, NAHB supports the goals of the ESA in protecting endangered and threatened species and their habitats, but these protection measures must be based on reliable, accurate and solid biological and scientific data. Our members are often prevented from developing their property or must submit to extensive mitigation requirements based upon what are often hypothetical and speculative impacts to species and their habitats. Continuing to apply unsound, unreviewable, and at times fraudulent evidence in ESA decisions could endanger the very species it seeks to protect, and it will certainly continue to unfairly raise the cost of housing, lock families out of the housing market, and have harmful effects on our economic recovery.

Congress intended critical habitat to encompass limited geographic scope. The ESA restricts critical habitat to those "specific" areas that are found to be "essential" to species conservation based on the best available scientific data, and after considering the economic impacts of the designation. However, the Services usually designate critical habitat only as the result of litigation filed by environmental groups. Accordingly, the Services fail to engage in the rigorous scientific and economic analyses required by the Act and paint with too broad a brush and improperly include huge swaths of historic and potential habitat areas within the "critical" habitat designation. NAHB looks forward to continuing to work with this committee, with Congress, and with the Services to ensure that Congress' intent with respect to critical habitat is properly carried out.

Mr. Chairman, I appreciate your leadership on this important issue, and thank you for your consideration of NAHB's views.

CANADIAN EMBASSY,
501 PENNSYLVANIA AVENUE NW,
Washington, DC 20001, May 2, 2003.

The Honorable MICHAEL CRAPO, *Chair,*
Senate Subcommittee on Fisheries, Wildlife, and Water,
U.S. Senate,
Senate Office Building,
Washington, DC 20510.

DEAR SENATOR CRAPO: I am taking this opportunity to correct information presented by the Defenders of Wildlife at the April 10th subcommittee hearing regarding the alleged impact softwood lumber logging in Canada has on the recovery of endangered Woodland Caribou in the United States.

In October 2002, the U.S. General Accounting Office (GAO) completed and released a detailed report (enclosed) entitled "United States and Canadian Efforts to Protect, Monitor and Recover Four Transboundary Species" (GAO–03–211 R). Woodland Caribou were included in that study, which focussed on forest-dependent species. Indeed, one of your subcommittee members, Senator Max Baucus (D-MT), was a requester of the study and his office is aware of the GAO's findings.

The GAO found that the management regimes for the four species, including the Woodland Caribou, are similar in the United States and Canada. The report also highlights the extensive cooperation that exists between Canadian and U.S. wildlife agencies, citing as prime examples the International Woodland Caribou Recovery Team and the International Mountain Caribou Technical Committee. Implementing joint recovery plans and sharing data, these multiagency teams are working expertly and objectively to enhance Woodland Caribou populations and to protect habitat on both sides of the border.

GAO notes that, according to governmental wildlife officials, "certain threats to the species, such as predation, residential and commercial development, and human recreational activities are equal or greater threats to transboundary species recovery than, for example, logging and logging roads". (p.2). Indeed, Idaho's Fish and Game Agency confirms that predation is an important factor in the high mortality levels of caribou transplanted to your State from Canada.

Canada has assisted with the recovery of U.S. Woodland Caribou by sending surplus caribou to Idaho to help the State's endangered population. For example, between 1987 and 1990 alone, 60 Woodland Caribou were moved to northern Idaho from British Columbia to help bolster the remnant herd.

I hope the report is of assistance to you in your discussion of the softwood lumber issue at the upcoming Canada-U.S. Interparliamentary Group in Niagara Falls, N.Y.

Yours sincerely,

MICHAEL KERGIN
Ambassador

GENERAL ACCOUNTING OFFICE,
Washington, DC, October 31, 2002.

The Honorable MAX BAUCUS,
The Honorable LINCOLN D. CHAFEE
U.S. Senate.

SUBJECT: TRANSBOUNDARY SPECIES: POTENTIAL IMPACT TO SPECIES

The United States/Canada Softwood Lumber Agreement expired in March 2001. As part of the preparation process for renegotiating the agreement, the United States Trade Representative requested public comment on softwood lumber trade issues between the United States and Canada and on Canadian softwood lumbering practices. The comments received included allegations that Canadian lumbering and forestry practices were affecting animal species with U.S./Canadian ranges (transboundary species) that are listed as threatened or endangered in the United States. To consider these comments as well as provide useful information to the U.S. Trade Representative in the renegotiations, the Department of the Interior, with the Department's U.S. Fish and Wildlife Service's (FWS) assistance, prepared a conservation status report on selected species that may be affected by the new agree-

ment. The status report presented summaries of information on eight transboundary species and reached preliminary conclusions of potential impact to four species.

You asked us to review the information and the process that Interior used to develop the January 2001 status report as well as provide you with updated information concerning several specific transboundary species. Accordingly, this report describes the (1) supporting information that FWS used and the process it followed when compiling its information for the Department of the Interior's January 2001 conservation status report on selected threatened or endangered species with U.S./Canadian ranges; and (2) existing U.S. and Canadian efforts aimed at protecting, monitoring, and facilitating the eventual recovery of four transboundary species-the bull trout, grizzly bear, marbled murrelet, and woodland caribou-listed as threatened or endangered in the United States.

On October 4, 2002, we briefed your offices on the results of our work. This report transmits the materials used during that briefing.

Results in Brief

In compiling the information for the Department of the Interior's 2001 conservation status report for the U.S. Trade Representative, the Fish and Wildlife Service relied chiefly on previously published material and internal agency documents, such as individual species recovery plans, Federal Register listing information, other administrative records, and public comments received. According to the FWS official we contacted, FWS headquarters had to compile the report under a tight timeframe and did not have time to consult with the regional recovery team coordinators responsible for monitoring the species or seek updated information to supplement the information used from dated species recovery plans. From our analysis of the report and our discussions with U.S. and Canadian wildlife officials, we believe that the report, among other things,

- understates the extent of cooperation between U.S. and Canadian officials to monitor, protect, and recover transboundary populations of species listed as threatened or endangered in the United States. In particular, the report did not fully capture the extent of data exchange or joint initiatives undertaken, and
- gives little attention to certain threats to the species, such as predation, residential and commercial development, and human recreational activities, that, according to governmental wildlife officials, are equal or greater threats to transboundary species recovery than, for example, logging and logging roads.

Whereas the inclusion of such updated information has the potential to change the details presented in the report, we do not believe that the additional information would alter the report's general findings.

The United States and Canada similarly engage in processes-both on their respective side of the border and in collaboration with one another-aimed at protecting, monitoring, and facilitating the eventual recovery of the bull trout, grizzly bear, marbled murrelet, and woodland caribou. Specifically, wildlife officials on each side grant species a special protective status; outline the threats to the species; collect diverse sources of data to monitor the species' habitat and population trends; undertake specific species recovery, protection, and coordination activities; and encounter similar obstacles in their attempts to assess the species and facilitate its recovery. Furthermore, U.S. and Canadian officials often work in tandem by jointly participating in conferences on species recovery issues; consistently sharing species monitoring data and other technical information; and for certain species like the woodland caribou, jointly participate in the development of recovery plans.

Supplemental Information

In addition to the presentation slides used during our briefing, we also are enclosing the other documents discussed during that meeting (see enc. 1). Specifically, we are enclosing:

- the timetable for preparing the January 9, 2001 report (enc. II);
- the authorizing legislation and agreements related to the protection of species at risk in the United States and Canada (enc. III);
- the process for listing species in the United States and Canada (enc. IV); and
- an overview of species-specific information (enc. V). These materials supplement the content in the presentation slides. Scope and Methodology

To respond to the above objectives, we met with representatives of the Department of the Interior and FWS, the recovery coordinators for the four species, and Federal and provincial wildlife officials from Alberta and British Columbia. We reviewed documents associated with managing and recovering the four species. We

also contacted and obtained documents from environmental organizations and industry associations.

The maps that we present in enclosure V do not include the historical range or entire current range and may not be drawn to scale. We provided the maps, however, to provide readers with a general geographical reference to the range of habitat for these four transboundary species.

We performed our work on this assignment from March 2002 to September 2002 in accordance with generally accepted government auditing standards. A detailed description of our scope and methodology is included as enclosure VI.

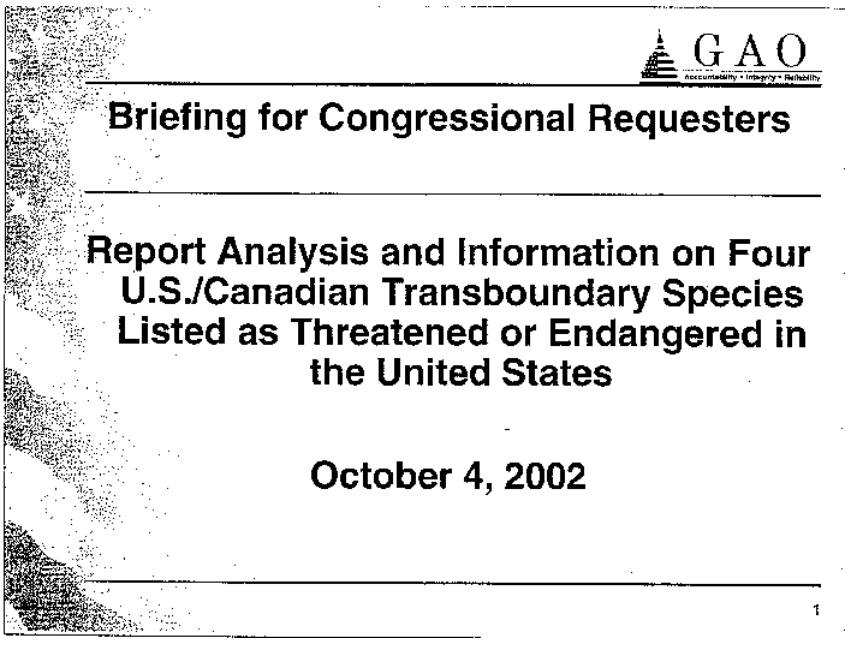
Agency Comments

While we did not receive comments on a draft of this report, we did hold exit conferences with the various U.S. and Canadian officials that we met in the course of our review and obtained oral comments. During the exit conferences we discussed the information used to develop the briefing slides and supplemental enclosures with appropriate U.S. and Canadian officials. Generally, the officials indicated that the information was accurate and provided a good, general overview of their respective species management and recovery programs. The officials also provided some technical clarifications that we have incorporated as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, copies of this report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have any questions on the matters discussed in this report, you may contact me at (202) 512–3841. Major contributors to this report were Linda L. Harmon, Michael J. Rahl, and Jonathan McMurray.

BARRY T. HILL
Director, Natural Resources and Environment.



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Objectives

- Describe the supporting information that the U.S. Fish and Wildlife Service (FWS) used and the process it followed when compiling information for the Department of the Interior's 2001 conservation status report on selected threatened or endangered species with U.S./Canadian ranges.
- Describe existing U.S. and Canadian efforts aimed at protecting, monitoring, and facilitating the eventual recovery of four transboundary species listed as threatened or endangered in the United States—the bull trout, grizzly bear, marbled murrelet, and woodland caribou.

2

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Scope and Methodology

- Reviewed species recovery plans, *Federal Register* species listings, background materials, and evaluative studies on the four species.
- Interviewed Department of the Interior officials; FWS officials (in headquarters and the regions) and FWS recovery coordinators for the four species.
- Interviewed (1) provincial fish and wildlife officials; biologists, wildlife; forestry; and recreational specialists in Alberta and British Columbia and (2) Parks Canada and Canadian Wildlife Service officials responsible for managing the four species.

3

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Scope and Methodology (continued)

- Contacted representatives from environmental organizations and industry associations and reviewed documents provided.

4

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Results in Brief

In compiling information for the 2001 conservation status report for the U.S. Trade Representative, FWS

- consulted previously published material, public comments, and internal agency documents and
- did not consult with its regional recovery team coordinators responsible for monitoring the species or seek updated information to supplement the information found in older species recovery plans.

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Results in Brief (continued)

Wildlife officials in the United States and Canada similarly engage in processes—both on their respective side of the border and in collaboration with one another—aimed at identifying, listing, protecting, and monitoring the eventual recovery of the bull trout, grizzly bear, marbled murrelet, and woodland caribou.

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Compiling the January 2001 Report

7

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Genesis of the January 2001 Report

- The U.S. Trade Representative asked the Department of the Interior to provide information on the potential environmental effects of the U.S./Canada Softwood Lumber Agreement and to review the public comments received on these issues.
- Interior requests that FWS prepare preliminary write-ups on issues related to transboundary species for its report *Summary of the Conservation Status of Selected Forest-Related Species with U.S./Canada Ranges.*

8

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Purpose of January 2001 Report

Department of the Interior officials indicated that the report

- was intended to review the state of knowledge on the status of certain species with transboundary ranges in light of public comments alleging threats to species due to timber harvesting in Canada, much of which is exported to the United States,
- was a brief overview based on immediately available knowledge and was not intended to be a thorough review such as the review of a species' biological status required under section 4 of the Endangered Species Act,

9

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Purpose of January 2001 Report (continued)

- focused on the effects relating to logging and forest management to help government officials consider these public concerns, not because it reached a conclusion that those are the most important threats for any given species even though, in most cases, these effects are significant.

10

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Information Contained in the January 2001 Report

The report summarized the readily available information on the

- biological and legal status of eight species said to be potentially affected by Canadian timber harvesting;
- threats to these species;
- transboundary aspects of these species, such as range;
- effects of Canadian timber practices on these species; and
- extent of U.S./Canadian cooperation in efforts to study, conserve, or manage these species.

11

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Information Consulted in Preparing the January 2001 Report

In compiling its report, FWS used

- published documents (no new research conducted),
- existing recovery plans and listing information,
- *Federal Register* notices and public comments, and
- administrative records and general staff knowledge.

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Information Not Considered in Preparing the January 2001 Report

When compiling information for the 2001 report,

- FWS did not review or consider a number of available articles, papers, and other literature on Canadian lumbering practices and their potential impact on transboundary species;
- concerns raised in these articles and papers generally echoed the concerns raised in the public comments that FWS had reviewed; and
- further consideration of these sources would not have changed the focus or the content of the January 2001 report, according to FWS.

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U.S. and Canadian Efforts to Protect, Monitor, and Recover Transboundary Species

15

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Efforts to Protect, Monitor, and Recover Four Transboundary Species

Wildlife officials in the United States and Canada similarly engage in identification, listing, protection, and recovery activities and programs for the four species. Specifically, they

- grant the species a special protective status;
- identify the threats to the species;
- collect diverse sources of data to monitor the species' habitat and population trends;
- undertake specific species recovery, protection, and coordination activities; and
- encounter similar obstacles in their attempts to assess the species and facilitate its recovery.

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Special Designation of Species

Species	United States	Government of Canada	Alberta	British Columbia
Bull trout	Threatened	(Not assessed)	Special concern	Vulnerable
Grizzly bear	Threatened	Special concern	(Under review)	Special concern
Marbled murrelet	Threatened	Threatened	(Not applicable)	Threatened
Woodland caribou	Endangered	Threatened[a]	Threatened[b]	Threatened

[a]The government of Canada classifies the Southern Mountain population as "threatened" and the Northern Mountain population as "special concern." The Southern Mountain population includes the herd that is transboundary.
[b]Alberta does not share transboundary populations with the United States. The provinces' populations of concern are shared with British Columbia.

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Threats to the Species

- Roads/Highways.
- Recreation—hunting, fishing, camping, and snowmobiles.
- Predation.
- Commercial and residential development.
- Irrigation projects.
- Resource extraction/use—lumbering, mining, and grazing.

18

Data Collected to Monitor Species

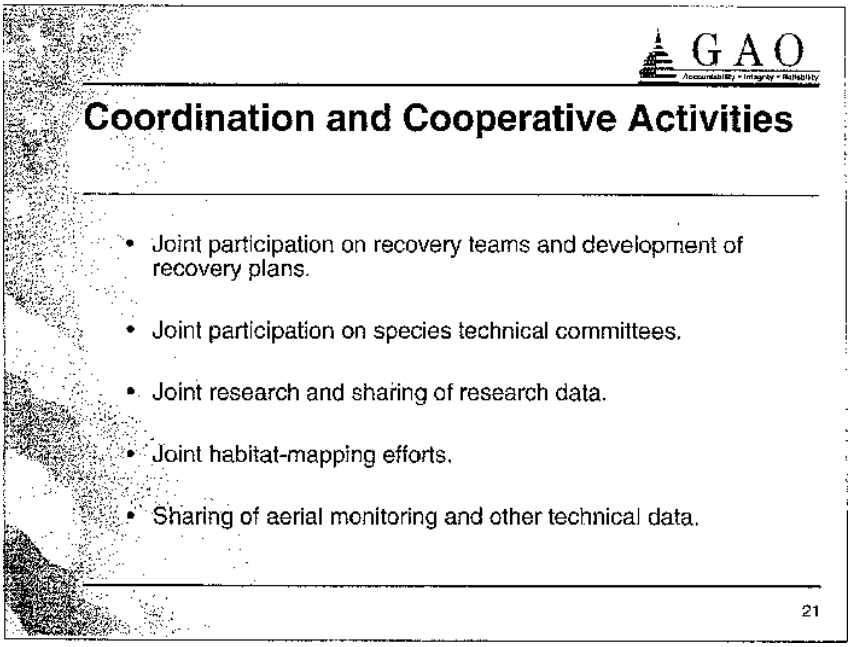
- Credible species sightings, annual species and nest counts to determine reproductive success, population baselines, census, and trends.
- Radio telemetry, satellite information, radar information, and DNA analysis for range assessments; uses of, and obstacles to, habitat access; and linkage zones between habitats.
- Law enforcement, accident reports, hunting and fishing records, and found dead specimens to determine mortality factors.
- Best scientific data available and peer-reviewed protocols are to be used to better ensure accuracy, consistency, and reliability of data.

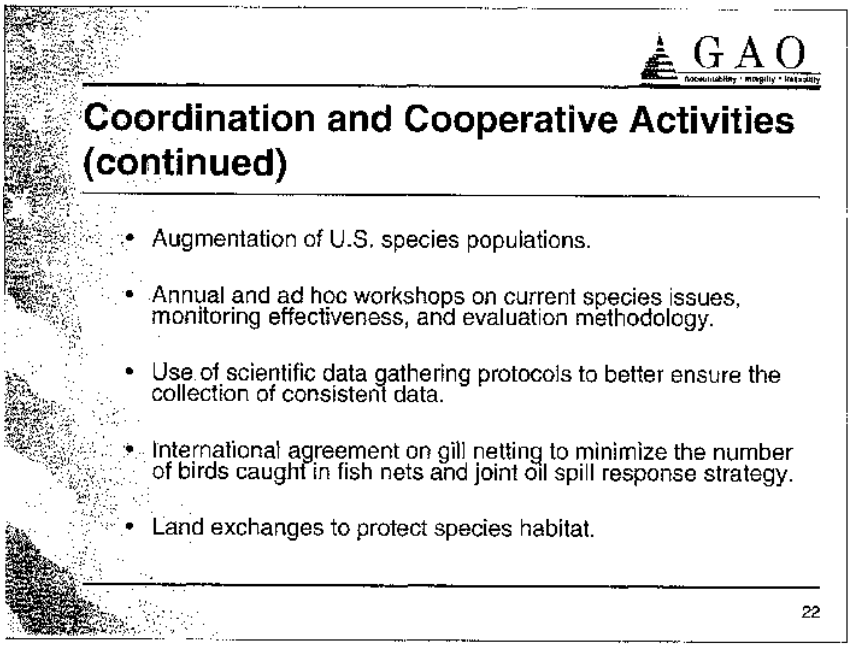
19

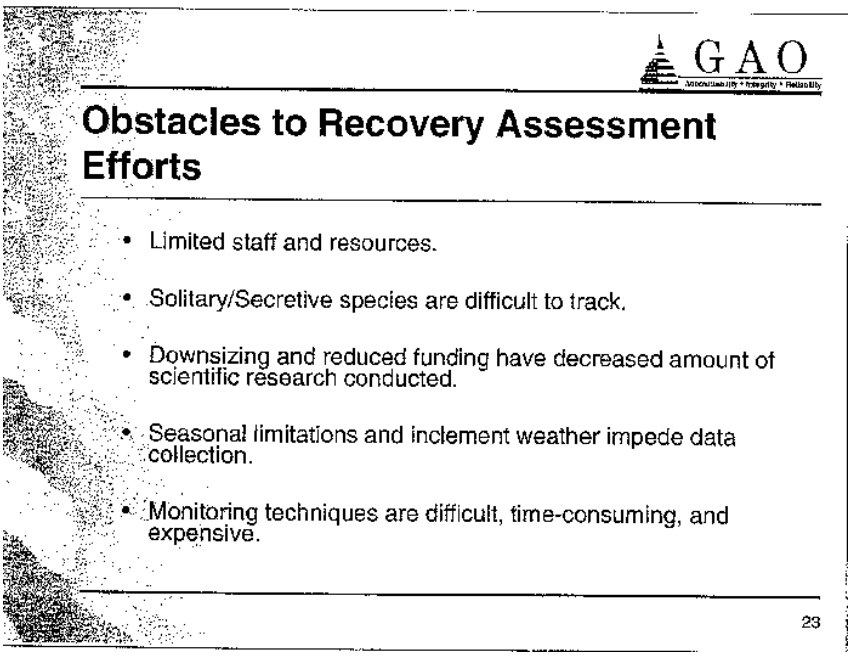
Recovery and Protection Activities

- Adjust or eliminate land use and resource extraction activities.
- Limit public access to species habitat.
- Restrict commercial recreation enterprises.
- Restore, protect, or enhance species habitat.
- Augment species populations.
- Prohibit or restrict fishing or hunting.
- Manage predators.
- Implement community outreach and educational programs.

20


GAO
Coordination and Cooperative Activities
• Joint participation on recovery teams and development of recovery plans.
• Joint participation on species technical committees.
• Joint research and sharing of research data.
• Joint habitat-mapping efforts.
• Sharing of aerial monitoring and other technical data.
21


GAO
Coordination and Cooperative Activities (continued)
• Augmentation of U.S. species populations.
• Annual and ad hoc workshops on current species issues, monitoring effectiveness, and evaluation methodology.
• Use of scientific data gathering protocols to better ensure the collection of consistent data.
• International agreement on gill netting to minimize the number of birds caught in fish nets and joint oil spill response strategy.
• Land exchanges to protect species habitat.
22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Obstacles to Recovery Assessment Efforts
• Limited staff and resources.
• Solitary/Secretive species are difficult to track.
• Downsizing and reduced funding have decreased amount of scientific research conducted.
• Seasonal limitations and inclement weather impede data collection.
• Monitoring techniques are difficult, time-consuming, and expensive.
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Enclosure II

Time Table for Preparation of January 9, 2001 Report

Presented below are the key dates relating the development and issuance of the January 9, 2001 report entitled *Summary of the Conservation Status of Selected Forest-Related Species with U.S./Canada Ranges* prepared by the Department of the Interior, with assistance of the U.S. Fish and Wildlife Service. That report was in response to a request for assistance in assessing the public comments received by the U.S. Trade Representative regarding the environmental concerns as they relate to the renegotiation of the U.S./Canada Softwood Lumber Agreement.

Date	Action/Activity
Mar. 2, 2000	U.S. Trade Representative issues *Federal Register* notice (65 F.R. 11363) requesting public comment regarding softwood lumber practices in Canada and softwood lumber trade between the United States and Canada.
Aug. 4, 2000	Deputy Secretary of the Interior identifies focal point for coordinating Interior's role in studying the environmental issues relating to U.S./ Canadian softwood lumber trade.
Aug. 28, 2000	Interior seeks information from FWS responding to four questions regarding eight U.S.-listed transboundary species identified as potentially affected by Canadian lumbering practices.
Aug. 28, 2000-Sept. 29, 2000	FWS considers transboundary aspects of eight U.S.-listed species as well as the issues identified in public comments.
Sept. 29, 2000	FWS provides write-ups on the eight species to Interior.
Fall 2000	Interagency coordination/working group discusses issues, and Interior and FWS review FWS' write-ups (informal process).
Oct. 22, 2000	Interior sends outline of proposed report to U.S. Trade Representative.
Oct. 25, 2000	U.S. Trade Representative circulates the outline of the proposed report to the interagency coordinating/working group.
Oct. 25, 2000 – Nov. 2000	Interior consolidates FWS's write-ups into report format. Interior circulates two report iterations internally.

Enclosure II

Date	Action/Activity
Nov. 3, 2000	Interior internally circulates copies of a revised draft and sends it to FWS's Acting Assistant Director for International Activities.
Fall/Winter 2000-2001	Interior shows the draft to the U.S. Trade Representative.
Jan. 9, 2001	Interior finalizes report.
Jan. 18, 2001	Interior delivers final report to the U.S. Trade Representative.

Enclosure III

Authorizing Legislation and Agreements Related to Species at Risk in the United States and Canada

Listed below are the key legislation or signed agreements that establish the framework for endangered species protection in the United States, in Canada, and in the provinces of Alberta and British Columbia.

Location	Legislation or Agreement
U.S. Government	• Endangered Species Act • Migratory Bird Treaty Act • Magnuson-Stevens Fishery Conservation and Management Act • National Forest Management Act • Federal Land Policy and Management Act • National Environmental Policy Act • Framework for Cooperation Between the U.S. Department of the Interior and Environment Canada in the Protection and Recovery of Wild Species at Risk.
Government of Canada	• Species At Risk Act (federal law under consideration) • The Fisheries Act • Migratory Birds Convention Act • Canadian Wildlife Act • National Parks Act • Accord for the Protection of Species at Risk (agreed to by federal/provincal/territorial agencies) • United Nations' Convention on Conservation of Biological Diversity • Framework for Cooperation Between the U.S. Department of the Interior and Environment Canada in the Protection and Recovery of Wild Species at Risk.
Province of Alberta	• Wildlife Act • Forests Act • Fisheries Act • Accord for the Protection of Species at Risk.
Province of British Columbia	• Forest Practices Code of British Columbia Act • Wildlife Act • Forest Land Reserve Act • Accord for the Protection of Species at Risk.

Enclosure IV

Process for Listing Species

The United States, the government of Canada, and the Provinces of Alberta and British Columbia each follow a process by which individual species are assessed and may be granted a special designation if found to be under threat. Presented below is a brief overview of the process that each governmental organization follows in making the decision to list or not list a species.

U.S. Government

- The Fish and Wildlife Service lists species as a result of initiating an evaluation or as a result of being petitioned by an individual, group, or agency to list a species. If petitioned, established time frames apply.
- Ninety-day finding on sufficiency of petition information to support whether the listing may be warranted. If so, FWS begins detailed biological evaluation.
- Twelve-month finding, on the basis of biological information alone, on whether the petitioned species should be listed. Self-initiated listing based on species priority. Decision to propose listing published in the *Federal Register*.
- Final rule to list or withdraw the proposed listing issued within 12 months after evaluating any additional information and public comments. This period can be extended to a maximum of 18 months if there is a disagreement about the sufficiency or accuracy of the available biological data.
- Risk categories include the following:
    - Endangered—a species that is in danger of extinction throughout all or a significant portion of its range.
    - Threatened—a species that is likely to become endangered in the foreseeable future.
- Recovery plans generally to be completed within 2.5 years of listing and reviewed/revised as information warrants.

Government of Canada

- The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) produces the official list of Canadian species at risk. Species are listed as the result of a four-step process.
    - Eligibility of species is determined on the basis of validity of species or subspecies, Canadian native, regularity of occurrence,

and whether species require Canadian lands or waters for a key part of their life cycle.

- Species specialist groups develop prioritized lists of candidate species.
- Status reports developed to assess risk of extinction. May be commissioned by COSEWIC or submitted by any person.
- Final status determination published as the public record and provided to the Canadian Endangered Species Conservation Council.

- Risk categories include the following:
  - Extinct—a species that no longer exists.
  - Extirpated—a species that no longer exists in the wild in Canada but occurs elsewhere.
  - Endangered—a species facing imminent extirpation or extinction.
  - Threatened—a species that is likely to become endangered if limiting factors are not reversed.
  - Special concern—a species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.
  - Not at risk—a species that has been evaluated and found to be not at risk.
  - Data deficient—a species for which there is insufficient scientific information to support status designation.
- The Canadian Endangered Species Conservation Council accepts the COSEWIC list and determines the priorities for recovery actions.
- Under the Accord for the Protection of Species at Risk, the jurisdictions agree to prepare recovery strategies within specified timelines and to report annually to the public on the status of recovery actions across Canada.

Province of Alberta

- The Alberta Wildlife Management Division of the Ministry of Sustainable Resource Development ranks the general status of each Alberta species and identifies initial priorities for species assessment, the species for which additional data need to be collected, and potential species needing management efforts.

Enclosure IV

- The Alberta Wildlife Management Division works with the Alberta Conservation Association to develop a detailed status report for species determined to potentially need management attention—"at risk" or "may be at risk" species.

- The Scientific Subcommittee of the Endangered Species Conservation Committee receives the detailed status report to perform an independent biological assessment of the level of risk. The subcommittee's recommendation regarding the level of risk is referred to the full committee.

- The Endangered Species Conservation Committee recommends the legal designation and protections for threatened and endangered species to the Minister of Sustainable Resource Development.

- The Minister of Sustainable Resource Development must decide whether to designate the species under the Wildlife Act. The Endangered Species Conservation Committee prepares and oversees the implementation of an initial conservation action statement for designated species identifying actions to be taken to conserve the species while a recovery plan is being developed.

- Risk categories include the following:

  - Extinct—a species that no longer exists.

  - Extirpated—a species that no longer exists in the wild in Alberta but occur elsewhere in the wild.

  - Endangered—a species facing imminent extirpation or extinction.

  - Threatened—a species that is likely to become endangered if limiting factors are not reversed.

  - Special concern—a species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

  - Data deficient—a species for which there is insufficient scientific information to support status designation.

- Recovery plans to be completed within 2 years of listing for threatened species, within 1 year for endangered species, and generally reviewed/revised every 5 years.

Enclosure IV

Province of British Columbia

- The Conservation Data Centre in the Ministry of Sustainable Resource Management annually assesses the degree of conservation risk for species for the purpose of identifying those most at risk, as well as to establish baseline ranks for each species. The Centre uses a standard set of criteria developed over 25 years by the international organization of NatureServe (formerly associated with the U.S. Nature Conservancy).

- Uses a global, national, and subnational rank for the species' range. Ranking assigns a risk of extinction score to each species. The Conservation Data Centre assigns the provincial rank solely on the basis of the status within British Columbia. NatureServe scientists assign the global and national ranks with guidance from various experts in North America.

- Compiles three lists of species—red, blue, and yellow—sorted by conservation risk. The red list includes species that are legally designated as endangered or threatened under the Wildlife Act, are extirpated, or are candidates for such designation. The blue list includes species not immediately threatened but of concern because of sensitivity to human activities or natural events. The yellow list includes all species not included on the red or blue lists.

- Risk categories include the following:

    - Extinct—a species that no longer exists.

    - Extirpated—a species that no longer exists in the wild in British Columbia but occurs elsewhere.

    - Endangered—a species facing imminent extirpation or extinction from British Columbia.

    - Threatened—a species that is likely to become endangered if limiting factors are not reversed.

    - Vulnerable—a species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

    - Not at Risk—a species that has been evaluated and found to be not at risk.

    - Indeterminate—a species for which there is insufficient scientific information to support a determination of status.

Enclosure IV

- Recovery plans are to be completed within 2 years of listing for threatened species, and within 1 year for endangered species, and are generally reviewed/revised every 5 years.

Enclosure V

Overview of Species-Specific Information

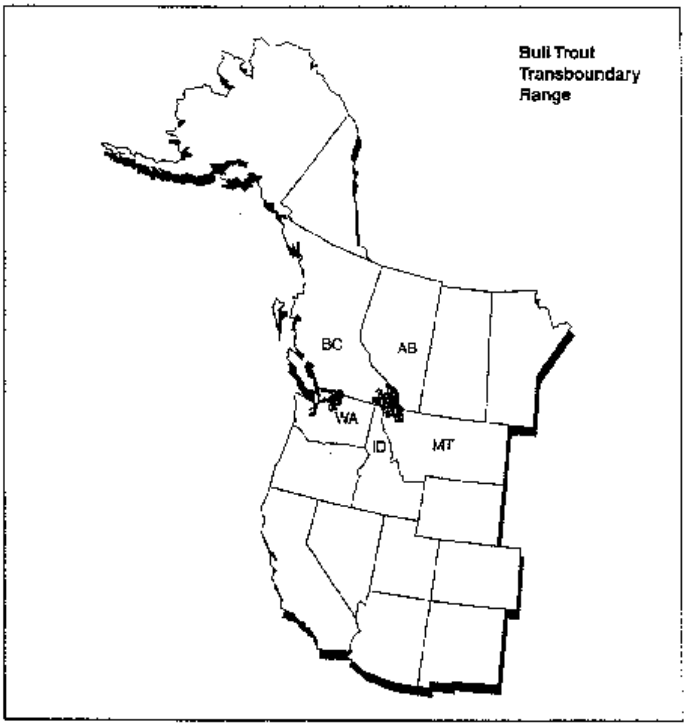
To identify the United States and Canadian efforts for protecting, monitoring, and facilitating the eventual recovery of four transboundary species listed as threatened or endangered in the United States, we spoke with wildlife officials in the Provinces of Alberta and British Columbia and the four Fish and Wildlife Service recovery coordinators for the bull trout, grizzly bear, marbled murrelet, and woodland caribou. We discussed the transboundary ranges of the species, the special designation afforded the species by these governmental units, the threats to the species, the types of data collected to monitor the impacts on and the population trends of the species, the recovery and protection activities undertaken, and the coordination and cooperative efforts between these entities.

Presented below is an overview of the results of these discussions. In addition, we have included maps to provide the reader with an overview of the general geographical locations that transboundary populations of these species currently inhabit. The maps are intended only to provide the reader with a general reference to the locations we are discussing. The species' historic ranges are not indicated, nor are the maps drawn to scale. Also, while the species-specific information is not intended to be all-inclusive, it serves to demonstrate that wildlife officials in both countries engage in similar activities and programs aimed at the eventual recovery of these four species, and that they face similar obstacles in accomplishing these goals.

Enclosure V

Bull Trout

Figure 1: Bull Trout's Transboundary Range



Source: GAO.

Status Listing

United States	Threatened
Government of Canada	Not assessed
Province of Alberta	Special concern
Province of British Columbia	Vulnerable

Enclosure V

Threats to the Species

- Introduction of nonnative species results in predation, competition, displacement, and interbreeding.
- Habitat fragmentation caused by road building, culverts, dams, and/or weirs potentially resulting in the genetic isolation of the fish population.
- Habitat degradation and effects on water quality caused by dams and hydroelectric operations; dewatering of streams for irrigation purposes; and grazing, mining, legacy effects of lumbering practices, and road development.
- Legal and illegal fishing and increased accessibility to habitat by fishermen using available roads.

Data Collected and Used to Monitor Species Population

- Measuring population census, population trends, and range of habitat—data on redd (nests) counts, counts of fish at fish fences and by electro fishing and snorkeling surveys; monitoring of tagged fish, and tracking of implanted fish with radio telemetry; DNA analysis to assess species identification and genetic classification; and quality and quantity of habitat.
- Mortality factors—number of fish killed by environmental occurrences, number of legal fish harvested (creel counts); and law enforcement data on fish illegally harvested.

Efforts to Manage Species

- Recovery and protection activities—establish zero-take limits and catch-and release requirements; repair or redesign culverts, dams, and weirs; modify dam operations to allow for improved fish passage; redesign irrigation mechanisms; increase stream buffers to reduce siltation and lower water temperature; restrict the placement of forest roads to reduce access by fishermen; establish temporary seasonal road closures, stream closures, and/or adjust open season dates to protect bull trout breeding populations; restrict types of gear or bait used; watershed restoration activities such as restoring physical habitat and nutrient levels; and public outreach and education to foster efforts for protection of the species and the habitat.
- Coordination activities—British Columbia, Alberta, and Parks Canada participate on U.S. recovery teams; joint U.S. and Canadian research such as that being sponsored by Trout Unlimited (a group that focuses on trout conservation), the Bonneville Power Administration, and the Bureau of Reclamation; international symposiums resulting in documents dealing

with international ecology and management of the bull trout; cooperative monitoring programs; joint workshops on monitoring and evaluation; and cooperation and communications at the technical level.

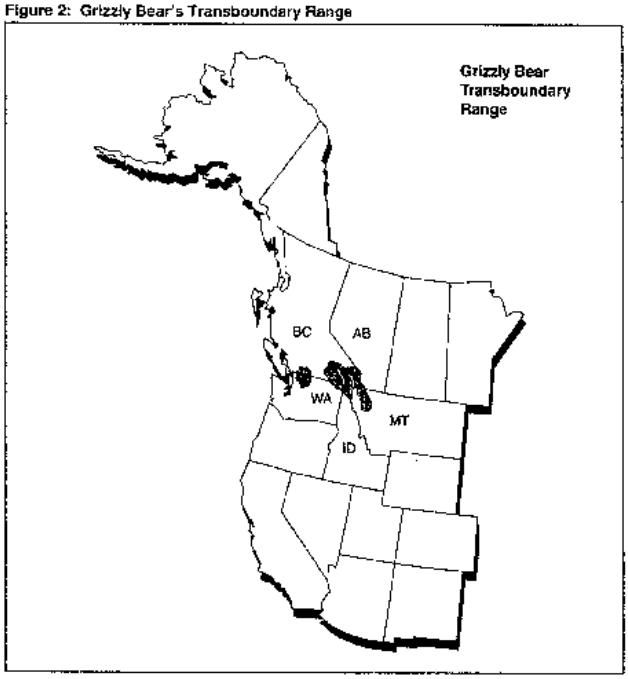
Obstacles to Assessment Efforts

- Inclement weather and instream conditions limit year-round data collection.
- Number of staff available to monitor is limited compared to the significant number of streams and number of distinct bull trout populations.
- Funding.

Enclosure V

Grizzly Bear

Figure 2: Grizzly Bear's Transboundary Range



Source: GAO.

Status Listing

United States	Threatened
Government of Canada	Special concern
Province of Alberta	Under review
Province of British Columbia	Special concern

Threats to the Species

- Habitat degradation caused by mining, forestry, and agricultural practices.
- Habitat fragmentation caused by residential, commercial, and transportation development.
- Low reproductive rate.

Enclosure V

- Human activities—illegal hunting, recreation.

Data Collected and Used to Monitor Species Population

- Population estimates—credible bear sightings, DNA population inventories and radio-telemetry-based research, and annual sow with cub count.
- Population trends—data from radio-collars looking for survivorship, and reproductive rates.
- Mortality factors—number of bears killed by autos or trains, harvested legally (hunting) or illegally (poaching), destruction of problem bears, specimens found dead.
- Species' response to habitat changes—research on the effects of harvesting and road building, DNA analysis to measure mobility within the species' range, data from radio- and global-positioning satellite collars.

Efforts to Manage Species

- Recovery and protection activities—community outreach and educational programs; elimination of, or restrictions on, hunting; identification, preservation, and protection of critical habitat; modification of forest plans to protect habitat; and modification of physical barriers.
- Coordination activities—joint participation in both U.S. and British Columbia recovery teams; joint participation in technical committees—such as the Interagency Grizzly Bear Committee, the Rocky Mountain Grizzly Bear Planning Committee, or the Grizzly Bear Scientific Advisory Committee; joint research and shared data; joint habitat management mapping efforts; and the Province of British Columbia's augmenting the U.S. population of grizzlies.

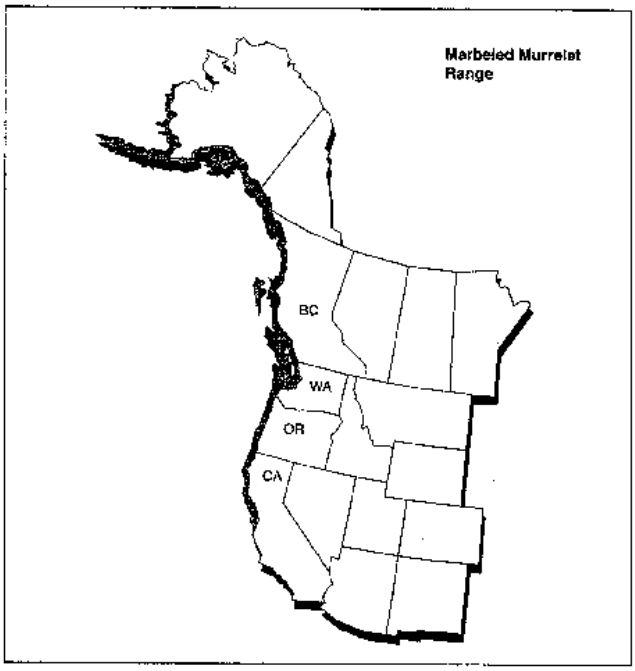
Obstacles to Assessment Efforts

- Limited funding and staff availability within agencies.
- Solitary species make opportunity for sightings difficult.
- Collars and collaring activities are expensive.
- Annual hibernation limits seasonal window for tracking and monitoring.

Enclosure V

Marbled Murrelet

Figure 3: Marbled Murrelet's Range



Source: GAO.

Status Listing

United States	Threatened
Government of Canada	Threatened
Province of Alberta	Not applicable
Province of British Columbia	Threatened

Threats to the Species

- Habitat losses and fragmentation caused by harvesting of old growth timber and fires. Existing trees may take more than 100 years to become old growth (old growth being trees 140 to 250+ years old).

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- Nest predation by crows, jays, ravens, squirrels, and mice.
- Oil spills—major occurrences.
- Entanglement in fishing nets while searching for food.
- Low reproductive rate.

Data Collected and Used to Monitor Species Population

- Population census and trends—"at sea" bird counts; marine radar counts; field surveys to determine habitat usage; capturing and banding to measure adult survival and to track movement; monitoring habitat and nesting use; developing habitat maps from satellite images and forest cover maps; and radio telemetry to monitor habitat use, nesting success, and movement.
- Mortality—observer surveys to determine number of birds caught in fishing nets, number of birds killed in major oil spills, and number of eggs or young found dead on the ground.

Efforts to Manage Species

- Recovery and protection activities—interagency implementation of the Pacific Northwest Forest Plan; establishing wildlife habitat protection measures in known nesting areas; modifying fishing nets to reduce entanglements; outlawing monofilament fishing nets in British Columbia; exchanging lands to protect habitat; Canadian timber purchasers voluntarily deferring the harvesting of old growth timber; encouraging use of habitat conservation plans; excluding net fishing in key murrelet concentration areas in the Puget Sound; and considering habitat in land use planning activities.
- Cooperative activities—joint participation in the Pacific Seabird Group and its Marbled Murrelet Technical Committee; international agreement on gill net fishers to minimize the number of birds caught in fishing nets; joint oil spill strategy to respond to spills; collaborative research efforts; annual and ad hoc workshops; informal communications to share program and research information; interagency teams to assess effectiveness monitoring; changing management actions at national and state parks—for example, changing the timing of operations, and finding better ways to manage garbage; using different silvicultural techniques to accelerate habitat growth; and the use of Pacific Seabird Group protocols for bird counts in forest surveys to better ensure the collection of reliable and consistent data.

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Obstacles to Assessment Efforts

- Evasive species make it difficult to track because they travel at dawn and dusk.
- Individual nesting places difficult to locate because they are located high on a limb in old growth forests.
- Lack of scientific evidence on the extent of north/south migration and whether the species migrates across the border.
- Tagged birds may not fly inland to nest.
- Downsizing and reduced funding have decreased amount of research and increased the difficulty of obtaining implementation funding and attracting expertise.

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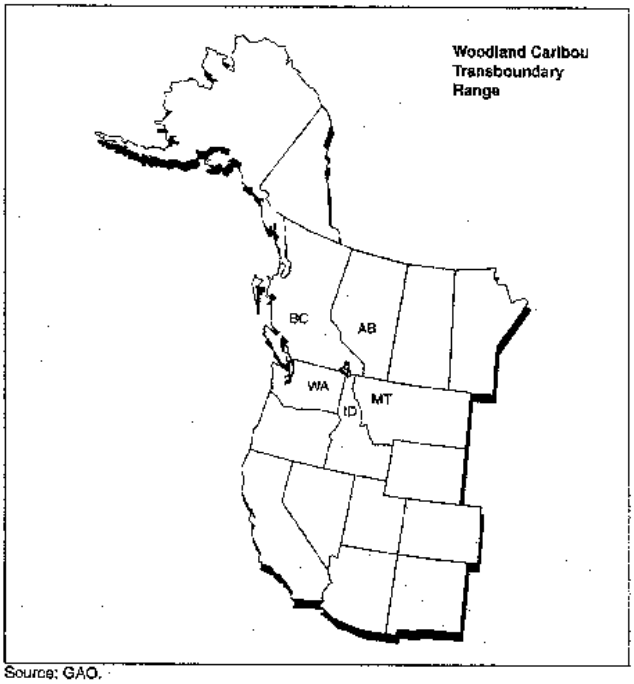
Woodland Caribou

Figure 4: Woodland Caribou's Transboundary Range



Source: GAO.

Status Listing

United States	Endangered
Government of Canada	Threatened[a]
Province of Alberta	Threatened[b]
Province of British Columbia	Threatened

[a]The government of Canada classifies the Southern Mountain population as "threatened" and the Northern Mountain National Ecological Area population as "special concern." The Southern Mountain National Ecological Area population includes the herd that is transboundary.
[b]Alberta does not share transboundary populations with the United States. The province's populations of concern are shared with British Columbia.

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Threats to the Species

- Predation by cougars, potential threats by bears.
- Winter recreation—snowmobiles and helicopter skiing.
- Habitat degradation—cumulative effects of historical timber harvests and fire, logging on state and private lands, increased recreational access provided by forest road construction.
- Habitat fragmentation—roads and highways/timber harvests/wildfires.
- Poaching/accidental killings.
- Weather conditions potentially reduce food sources.

Data Collected and Used to Monitor Species Population

- Population census and population trends—data from radio collars and aerial sightings.
- Mortality factors—data from radio collars, law enforcement data on poaching, vehicle fatalities, specimens found dead.

Efforts to Manage Species

- Recovery and protection activities—predator management through white tail deer and cougar harvests, guidelines for protecting and managing caribou habitat to be considered in land use planning, hunting of caribou herds prohibited and hunting seasons for other species may be closed in caribou habitat to prevent accidental shootings, establishing park and wildlife management recovery areas in caribou habitat recovery areas, voluntary road closures to limit access to back country recreation and legislative closures implemented where necessary, restrictions on commercial recreation enterprises; reward systems for reporting poachers; and community outreach and hunter education programs.
- Coordination activities—Joint U.S./Canadian representation on the International Woodland Caribou Recovery Team, which meets semiannually and develops and implements recovery actions for the transboundary population; joint U.S./Canadian participation on the International Mountain Caribou Technical Committee which was established as an international multiagency group of researchers, biologists, resource managers, industry representatives, and other concerned parties interested in recovering transboundary and South Purcell populations; the sharing of technical information as needed and at semiannual meetings and the sharing of enforcement information; the

undertaking of joint recreation management planning and strategies; states conduct aerial monitoring using Endangered Species Act funding and share information with the Fish and Wildlife Service and British Columbia; the exchanging of U.S. Forest Service land to protect caribou habitat; joint predator/prey research and management practices; and transplant efforts by Canada to supplement the U.S. caribou population.

Obstacles to Assessment Efforts

- Weather conditions affect ability to conduct population census by aerial monitoring.
- Differing public opinions on forest management and uses versus protection of the species.
- Funding.

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Scope and Methodology

The United States/Canada Softwood Lumber Agreement expired in March 2001. As part of the preparation process for renegotiating the agreement, the U.S. Trade Representative requested public comment on softwood lumber trade issues between the United States and Canada and on Canadian softwood lumbering practices. The comments received included allegations that Canadian lumbering and forestry practices were affecting animal species with U.S./Canadian ranges that are listed as threatened or endangered in the United States. To consider these comments as well as to provide the U.S. Trade Representative with useful information in the renegotiations, the Department of the Interior, with U.S. Fish and Wildlife Service's assistance, prepared a conservation status report on selected species that may be affected by the new agreement. The status report presented summaries of information on eight transboundary species and reached preliminary conclusions of potential impact on four species.

We reviewed the information and the process that Interior used to develop the January 2001 report, and to provide updated information concerning several specific transboundary species. Specifically, we describe (1) the supporting information that the U.S. Fish and Wildlife Service used, and the process it followed when compiling its information for the Department of the Interior's January 2001 conservation status report on selected threatened or endangered species with U.S./Canada ranges; and (2) existing U.S. and Canadian efforts aimed at protecting, monitoring, and facilitating the eventual recovery of four transboundary species—the bull trout, grizzly bear, marbled murrelet, and woodland caribou—listed as threatened or endangered in the United States.

Department of the Interior's January 2001 Report for the U.S. Trade Representative

To determine what information FWS used when assisting the Department of the Interior to prepare the January 2001 report, we spoke with the FWS official who compiled FWS' input for the report and reviewed recovery plans, *Federal Register* species listings, and species background materials. We traced the content of the January report for the four species back to the respective recovery plans or listing documents and discussed the other sources of information not readily identified in the recovery plans or listing documents with the FWS official. To determine whether the content of the January 2001 report generally reflected the current status of the four species, we reviewed the report with the four species recovery coordinators and discussed whether more recent information should have been included.

To determine whether the January 2001 report considered information external to FWS, we reviewed the public comments received by the U.S. Trade Representative relative to the U.S./Canada Softwood Lumber Trade Agreement and discussed whether the FWS official considered these comments in compiling the report. In addition, we contacted representatives from environmental organizations and industry associations to determine whether they were aware of studies that existed

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when the FWS compiled the January 2001 report that assessed the impacts of Canadian lumber practices on the U.S. populations of the four transboundary species. The organizations provided us with some known studies, which we discussed with the FWS official. We discussed with the FWS official whether the information contained in these studies had been considered when compiling the January 2001 report or if the consideration of this information would have changed the report's content or focus.

To determine the process that FWS and Interior followed when compiling the January 2001 conservation status report, we met with the Interior and FWS officials involved in preparing the report, obtained documents relating to the development of the report, and developed a timeline of the tasks and activities involved in producing the report for the U.S. Trade Representative.

U.S./Canadian Efforts to Protect, Monitor, and Recover Four Transboundary Species

To determine the U.S. efforts to protect, monitor, and recover the four transboundary species, we met with FWS regional officials and recovery coordinators responsible for the bull trout, grizzly bear, marbled murrelet, and woodland caribou. To determine the Canadian efforts, we met with federal and provincial fish and wildlife officials in Alberta and British Columbia involved with the four species. Specifically, we met with representatives of the federal Canadian Wildlife Service and Parks Canada; Alberta provincial representatives of the Fish and Wildlife Division, Sustainable Resource Development; and British Columbia provincial representatives of the (1) Biodiversity Branch, Ministry of Water, Land, and Air Protection; (2) Ministry of Forests; and (3) Conservation Data Centre.

From both the U.S. and Canadian officials, we obtained information on the pertinent laws, agreements, and processes affecting their programs undertaken to protect and recover the various species. In addition, we obtained general background on the respective species and obtained evaluative and monitoring data. Specifically, for each species, we determined the

- transboundary range of the U.S./Canadian populations,
- special designation afforded the species,
- threats to the species,
- types of data collected and used to establish and monitor baseline population data and trends,
- types of programs or activities undertaken to protect and recover the species,
- coordination activities between the United States and Canada, and

- obstacles faced by the governmental units in assessing and monitoring the species.

Data Limitations

While the above information reflects a broad perspective of U.S. and Canadian fish and wildlife operations, we did not undertake a detailed assessment of program implementation on either side of the border.

In addition, in the species-specific information in enclosure V, we included maps to provide the reader with a general geographical reference for the transboundary ranges that these species currently inhabit. The maps are intended only to provide the reader with a general reference to the locations we are discussing. The historic ranges are not included nor are the maps fully drawn to scale.

Finally, we included the marbled murriet in our assessment despite the fact that scientific evidence is unavailable to support that the species is truly transmigratory. As such, the map for the marbled murrelet depicts its entire range rather than a transboundary range as was done with the other species.